Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2302355577
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: _Garrett Green_____ Title: _Environmental Coordinator_____

Signature: _____ Date: __04/12/2023_____

email: __garrett.green@exxonmobil.com_____ Telephone: ___575-200-0729_____

OCD Only

Received by: Jocelyn Harimon Date: 04/13/2023

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Robert Hamlet Date: 8/30/2023

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	NAPP2302355577
District RP	
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Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Garrett Green	Contact Telephone 575-200-0729
Contact email garrett.green@exxonmobil.com	Incident # *(assigned by OCD)*
Contact mailing address 3104 E. Greene Street, Carlsbad, New Mexico, 88220	

Location of Release Source

Latitude 32.53388 Longitude -104.20765
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Avalon Delaware Unit 624	Site Type Well
Date Release Discovered 1/12/2023	API# *(if applicable)* Eddy

Unit Letter	Section	Township	Range	County
D	32	20S	28E	

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 0.27	Volume Recovered (bbls) 0.20
☒ Produced Water	Volume Released (bbls) 27.09	Volume Recovered (bbls) 19.80
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☒ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Corrosion on a flowline allowed fluids to release to soil. A vacuum truck recovered all free fluids. A third-party contractor has been retained for remediation purposes.

State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? A release equal to or greater than 25 barrels.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

Yes, by Melanie Collins to ocd.enviro (ocd.enviro@emnrd.nm.gov); , Bratcher, Michael, EMNRD, Hamlet, Robert, EMNRD and Harimon, Jocelyn, EMNRD on 1/13/2023 via email.

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.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

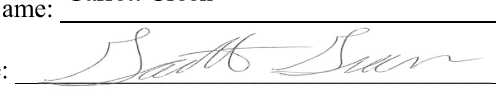
If all the actions described above have not been undertaken, explain why:

NA

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Garrett Green Title: SSHE Coordinator

Signature:  Date: 1/23/2023

email: garrett.green@exxonmobil.com Telephone: 575-200-0729

OCD Only

Received by: _____ Date: _____

Location:	**ADU 624**	
Spill Date:	**1/12/2023**	
Area 1		
Approximate Area =	1654.00	sq. ft.
Average Saturation (or depth) of spill =	2.00	inches
Average Porosity Factor =	0.15	
VOLUME OF LEAK		
Total Crude Oil =	0.27	bbls
Total Produced Water =	27.09	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**0.27**	**bbls**
Total Produced Water =	**27.09**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.20**	**bbls**
Total Produced Water =	**19.80**	**bbls**

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2302355577
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Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☒ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2302355577
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Printed Name: Garrett Green Title: Environmental Coordinator

Signature: Date: 04/12/2023

email: garrett.green@exxonmobil.com Telephone: 575-200-0729

OCD Only

Received by: Jocelyn Harimon Date: 04/13/2023

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2302355577
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Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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Printed Name: _Garrett Green_____ Title: _Environmental Coordinator_____

Signature: _____ Date: __04/12/2023_____

email: __garrett.green@exxonmobil.com_____ Telephone: ___575-200-0729_____

OCD Only

Received by: __Jocelyn Harimon_____ Date: __04/13/2023___

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

ENSOLUM

April 12, 2023

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Closure Request
Avalon Delaware Unit 624
Incident Numbers NAPP2302355577
Eddy County, New Mexico

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* to document the site assessment, excavation, and soil sampling activities completed at the Avalon Delaware Unit 624 (Site). The purpose of the remediation activities was to address impacted soil resulting from a flow line release of crude oil and produced water into the Site's surrounding pasture and into an excavation associated with previously closed Incident Numbers NAPP2123634554 and NAPP2215449179. Based on the remedial activites completed to remove impacted soil, XTO is submitting this *Closure Request*, describing site assessment and excavation activities that have occurred and requesting closure for Incident Number NAPP2302355577.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit D, Section 32, Township 20 South, Range 28 East, in Eddy County, New Mexico (32.53388°, -104.20765°) and is associated with oil and gas exploration and production operations on New Mexico State Land. Figure 1 depicts the site location on a topographic map.

On January 12, 2023, corrosion of a flow line resulted in the release of approximately 0.27 barrels (bbls) of crude oil and 27.09 bbls of produced water to the surrounding pasture and into an existing excavation. The excavation was the result of remediation activities conducted for separate Incident Numbers NAPP2123634554 and NAPP2215449179. A vacuum truck was dispatched immediately and approximately 0.20 bbls of crude oil and 19.80 bbls of produced water were recovered. XTO reported the release immediately to the New Mexico Oil Conservation Division (NMOCD) via email on January 13, 2023 and subsequently submitted a Release Notification Form C-141 (Form C-141) on January 23, 2023. The release was assigned Incident Number NAPP2302355577.

The previous incidents were addressed as detailed in an approved *Remediation Work Plan (Work Plan),* dated May 5, 2022. The *Work Plan* was approved by NMOCD on July 20, 2022 via email, with the following conditions:

- *The Remediation Plan is conditionally approved: The release will need to be remediated to the strictest closure criteria standards due to high karst potential. Please collect confirmation samples, representing no more than 200 [square feet]. The liner installation is only approved at 4 feet [below ground surface] (bgs) if all floor samples show [total petroleum hydrocarbons] (TPH) less than 100 [milligrams per kilogram] (mg/kg). Floor samples must be excavated to the strictest closure criteria, backfilled to 4 feet bgs with clean material, and then the liner installed. Samples*

must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. Sidewall samples should be delineated/excavated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release. The work will need to occur in 90 days after the work plan has been approved.

At the time of this new release, excavation of the previous releases had been completed and results submitted to the NMOCD in a *Closure Request,* dated November 17, 2022. The *Closure Request* was approved by NMOCD, and XTO was in the process of scheduling liner installation and backfilling when the new release occurred. In order to address the impacts to soil as quickly as possible and to finalize liner installation and backfilling, XTO conducted delineation and excavation activities immediately.

What follows is a description of the work completed in compliance with the approved *Work Plan* and *Closure Request* to address the previous releases, Incident Numbers NAPP2123634554 and NAPP2215449179, and work conducted to address new soil impacts for the most recent release, Incident Number NAPP2302355577.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

As documented in the *Work Plan*, the following NMOCD Table I Closure Criteria (Closure Criteria) apply due to high karst potential:

- Benzene: 10 mg/kg
- BTEX: 50 mg/kg
- TPH: 100 mg/kg
- Chloride: 600 mg/kg

INITIAL DELINEATION ACTIVITIES

On February 6, 2023 Ensolum personnel were at the Site to complete site assessment and delineation activities for the release based on information provided on the Form C-141s and visible surface staining observed in the release area. Potholes PH01 and PH02 were advanced via track-hoe within the accessible portion (i.e. outside of the existing excavation) of the release footprint to assess the vertical extent of impacted soil. The potholes were advanced to a maximum depth of 19 feet below ground surface (bgs). Delineation soil samples were collected from each pothole at depths ranging from 0.5 feet to 19 feet bgs. Soil from the potholes was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. Field screening results and observations for the potholes were logged on lithologic soil sampling logs, which are included in Appendix A. Photographic documentation was completed during the Site visit and a photographic log is included in Appendix B.

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 Laboratories (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. Soil samples delivered to the laboratory the same day they are collected may not have equilibrated to the 6 degrees Celcius required for shipment and long term storage, but are considered to have been received in acceptable condition.

Laboratory analytical results for delineation soil samples collected from potholes PH01 and PH02 indicated TPH and chloride concentrations exceeded the Site Closure Criteria. Elevated TPH concentrations were restricted to the ground surface. Elevated chloride concentrations occurred at depths ranging from 0.5 feet to 19 feet bgs. The terminal sample in pothole PH02, collected at 8 feet bgs was compliant with the Site Closure Criteria. The delineation soil sample locations are depicted on Figure 2. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included in Appendix C.

EXCAVATION ACTIVITIES

Between February 9, 2023 and February 20, 2023, Ensolum personnel were at the Site to complete excavation activities. Excavation was performed using a track-mounted backhoe and transport vehicles. The excavation was initiated to first address the impacts to the pasture that had not reached the open excavation. Soil in this area was excavated to a maximum depth of 5.5 feet bgs and following removal of the impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewalls of the excavation. Composite soil samples FS01 through FS09 were collected from the floor of the excavation at depths ranging from 4 feet to 5.5 feet bgs. Composite soil samples SW01 through SW05 were collected from the sidewalls of the excavation from depths ranging from the ground surface to 4 feet bgs. The soil samples were handled as described above at Eurofins in Carlsbad, New Mexico. Laboratory analytical results for the excavation floor samples FS03 and FS05 indicated TPH concentrations exceeded the Site Closure Criteria and additional remediation activities were warranted. Additional soil was removed from the vicinity and subsequent excavation soil samples FS03A and FS05A were collected at depths ranging from 5 feet to 5.5 feet bgs.

In order to address the impacts to soil within the existing excavation, Ensolum personnel oversaw the safe removal of soil from an existing excavation, which was already 20 feet deep in some places. An engineered excavation plan was implemented, which included sloping and benching of the clean sidewalls. Soil removed during sloping was stockpiled a safe distance from the excavation. Once the track-mounted backhoe could safely enter the excavation to operate on designed benches, removal of the more recently impacted soil began. The new excavation was completed to depths ranging from 12 feet bgs to 24 feet bgs, though the existing excavation only needed deepening by an additional 2 feet. Composite soil samples FS10 through FS14 were collected from the floors of the excavation and included soil representing the additional 2 feet of sidewalls exposed to remediate the new release. The final excavation extent and excavation soil sample locations are presented on Figure 3.

An additional delineation pothole, PH03, was advanced in the deepest area of the excavation floor. The pothole was advanced to 30 feet bgs. Delineation soil samples were collected from the pothole at depths of 26, 28, and 30 feet bgs. Soil from the potholes was field screened for VOCs and chloride and field screening results and observations were logged on a lithologic soil sampling log, which is included in Appendix A. The soil samples were handled as described above at Eurofins in Carlsbad, New Mexico.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for excavation floor samples FS04, FS05A, FS06, and FS07 and sidewall samples SW01 through SW05, collected in the pasture excavation, indicated all COC concentrations are compliant with the Site Closure Criteria. Laboratory analytical results for excavation soil samples FS01, FS02, FS03A, FS08, and FS09, collected at or below 4 feet, indicate all COC concentrations except chloride are compliant with the Site Closure Criteria. Within the existing excavation confirmation samples FS08 through FS14 exceeded the Site Closure Criteria for chloride. Chloride concentrations exceeding 600 mg/kg exist in the subsurface below 4 feet to a maximum depth of 26 feet bgs based on results from delineation pothole PH03.

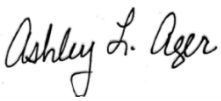
A total of approximately 300 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Hobbs, New Mexico. The final area of the excavation extended approximately 2,170 square feet. Upon completion of excavation activities, the excavation was backfilled to 4 feet bgs with backfill materials procured locally, including some of the clean sidewalls and floors or the original excavation that were stockpiled onsite. A 20-mil impermeable liner was installed over the chloride-impacted soil to mitigate further chloride impacts to the subsurface, as previously approved in the *Work Plan*. Ensolum extended the liner to include areas of the new release. Once the liner was installed, the entirety of the excavation was backfilled with locally procured topsoil and recontoured to match existing Site conditions.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the release of produced crude oil and water. Laboratory analytical results for the excavation soil samples indicated benzene, BTEX, TPH concentrations were compliant with the Site Closure Criteria. In addition, all impacted soil was removed from the top 4 feet of the subsurface and confirmation samples indicate chloride concentrations in the top 4 feet meet the Site Closure Criteria. XTO installed a 20-mil impermeable liner at 4 feet bgs over the deeper chloride impacted soil as approved in the *Work Plan* and *Closure Request* for incident numbers NAPP2123634554 and NAPP2215449179. The liner was extended to the north to address elevated chloride below 4 feet in the new release extent. The liner was backfilled with locally procured topsoil. The disturbed pasture area will be re-seeded with an approved BLM seed mixture.

XTO believes these remedial actions are protective of human health, the environment, and groundwater and respectfully requests closure for Incident Number NAPP2302355577. As such, XTO is requesting approval of this *Closure Request*. If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely,
Ensolum, LLC



Tacoma Morrissey, MS
Senior Geologist

Ashley L. Ager, MS, PG
Principal

cc: Garrett Green, XTO
Shelby Pennington, XTO
New Mexico State Land

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Figure 4	Liner Installation Map
Table 1	Soil Sample Analytical Results
Appendix A	Lithologic / Soil Sampling Logs
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports and Chain of Custody Documentation
Appendix D	NMOCD Notifications

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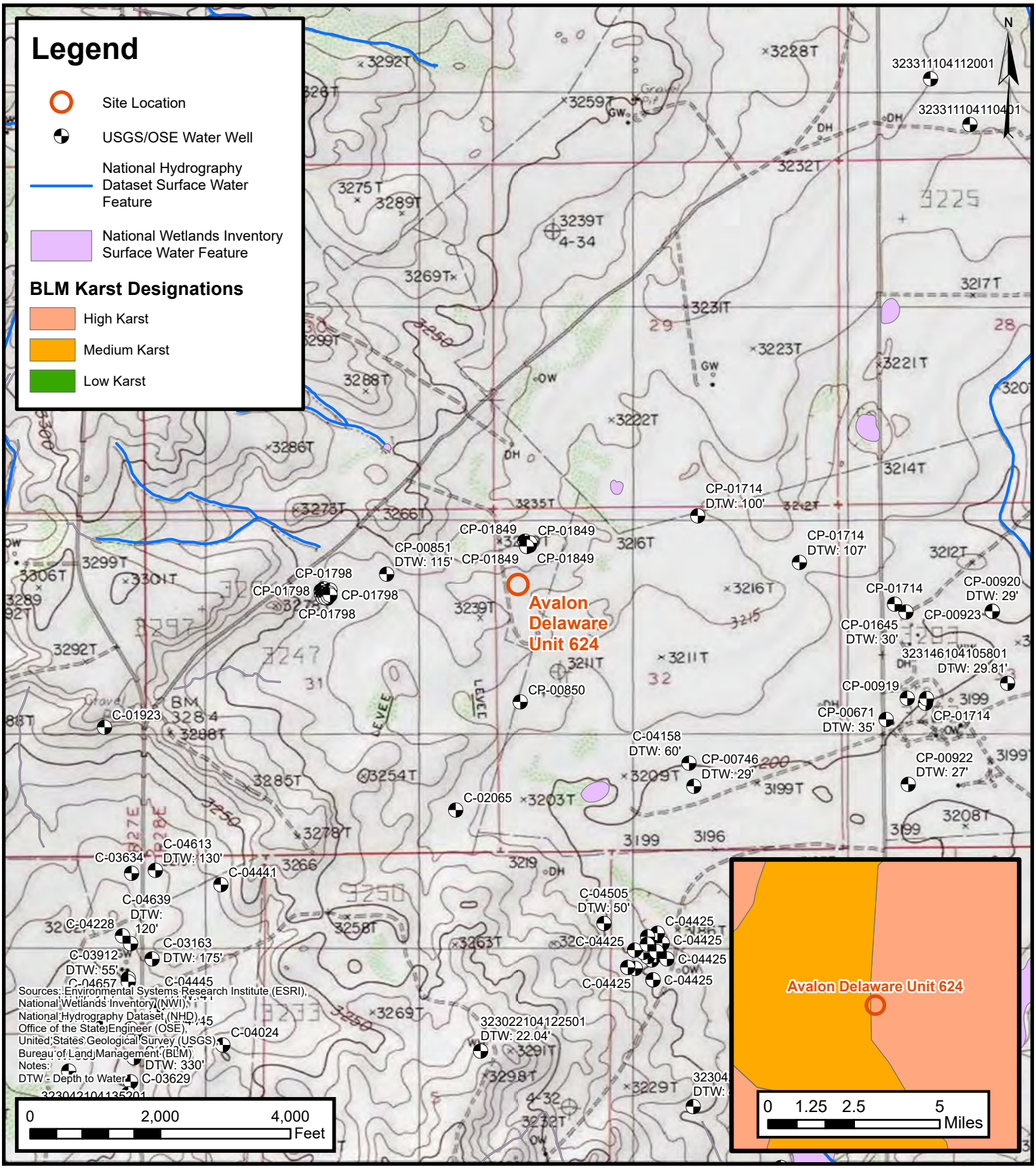
FIGURES



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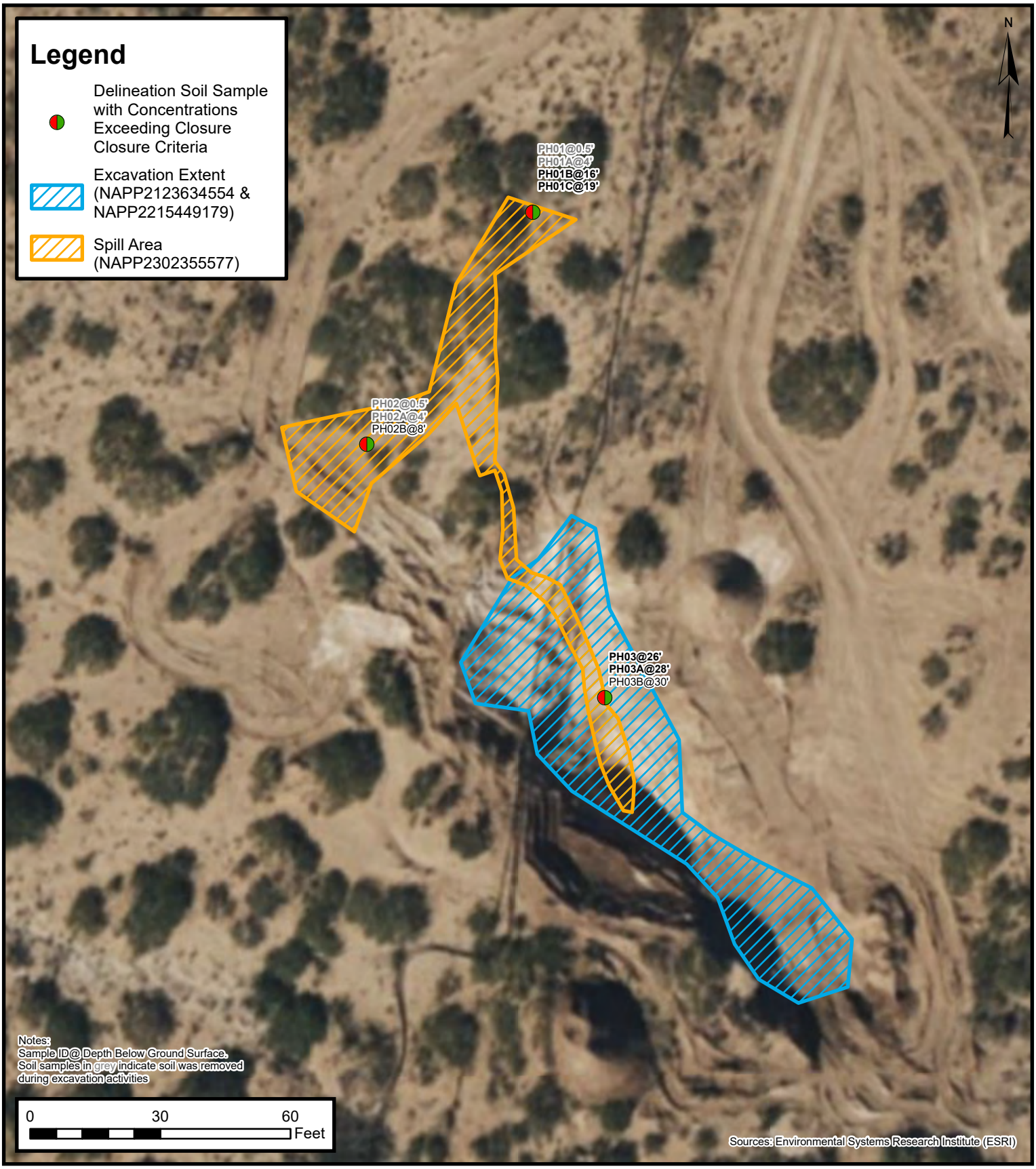
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

Avalon Delaware Unit 624
XTO ENERGY, INC
Incident ID: nAPP2302355577
Unit D, Section 32, Township 20 South, Range 28 East
Eddy County, New Mexico

FIGURE
1



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ENSOLUM
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Delineation Soil Sample Locations

Avalon Delaware Unit 624
XTO ENERGY, INC
Incident ID: nAPP2302355577
Unit D, Section 32, Township 20 South, Range 28 East
Eddy County, New Mexico

FIGURE
2

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Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

Avalon Delaware Unit 624
XTO ENERGY, INC
Incident ID: nAPP2302355577
Unit D, Section 32, Township 20 South, Range 28 East
Eddy County, New Mexico

FIGURE
3

Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\3 - Carlsbad\0 - Client Template\000000001 - Project Template\1 - Maps\Templates\Template - Soil Sample Locations.aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Liner Installation Map

Avalon Delaware Unit 624
XTO ENERGY, INC
Incident ID: nAPP2302355577
Unit D, Section 32, Township 20 South, Range 28 East
Eddy County, New Mexico

FIGURE
4

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Avalon Delaware Unit 624
XTO ENERGY, INC
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Soil Samples										
~~PH01~~	~~02/06/2023~~	~~0.5~~	~~0.174~~	~~22.7~~	~~298~~	~~1,750~~	~~128~~	~~**2,048**~~	~~**2,180**~~	~~**1,660**~~
~~PH01A~~	~~02/06/2023~~	~~4~~	~~0.0571~~	~~0.0877~~	~~<49.9~~	~~84.9~~	~~<49.9~~	~~84.9~~	~~84.9~~	~~**5,780**~~
PH01B	02/06/2023	16	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	**4,800**
PH01C	02/06/2023	19	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	**3,440**
~~PH02~~	~~02/06/2023~~	~~0.5~~	~~0.541~~	~~22.0~~	~~317~~	~~966~~	~~120~~	~~**1,283**~~	~~**1,400**~~	~~**616**~~
~~PH02A~~	~~02/06/2023~~	~~4~~	~~<0.00199~~	~~<0.00398~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~**3,130**~~
PH02B	02/06/2023	8	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	365
PH03	02/20/2023	26	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	**2,080**
PH03A	02/20/2023	28	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	**955**
PH03B	02/20/2023	30	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	572
Confirmation Soil Samples										
FS01	02/09/2023	4	<0.0200	0.0589	<49.9	85.8	<49.9	85.8	85.8	**3,710**
FS02	02/09/2023	4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	**3,670**
~~FS03~~	02/09/2023	~~4~~	~~<0.0199~~	~~<0.0398~~	~~<49.9~~	~~144~~	~~<49.9~~	~~144~~	~~**144**~~	~~**2,430**~~
FS03A	02/22/2023	5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	**3,530**
FS04	02/09/2023	4	<0.0198	<0.0396	<49.8	62.9	<49.8	62.9	62.9	384
~~FS05~~	02/09/2023	~~4~~	~~<0.0199~~	~~<0.0398~~	~~<50.0~~	~~112~~	~~<50.0~~	~~112~~	~~**112**~~	~~488~~
FS05A	02/22/2023	5.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	149
FS06	02/09/2023	4	<0.00199	<0.00398	<50.0	78.4	<50.0	78.4	78.4	442
FS07	02/09/2023	4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	406
FS08	02/09/2023	4	<0.0200	<0.0401	<49.9	<49.9	<49.9	<49.9	<49.9	**4,360**
FS09	02/09/2023	4	<0.0200	0.134	<50.0	<50.0	<50.0	<50.0	<50.0	**1,550**

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Avalon Delaware Unit 624
XTO ENERGY, INC
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
FS10	02/09/2023	12	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	**2,190**
FS11	02/09/2023	12	<0.00199	0.00440	<49.9	<49.9	<49.9	<49.9	<49.9	**3,630**
FS12	02/20/2023	16	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	**2,090**
FS13	02/20/2023	24	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	**3,530**
FS14	02/20/2023	24	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	**3,820**
SW01	02/07/2023	0 - 4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	6.83
SW02	02/07/2023	0 - 4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	<5.00
SW03	02/07/2023	0 - 4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	<4.99
SW04	02/07/2023	0 - 4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	<4.95
SW05	02/07/2023	0 - 4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	7.82

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation requirement where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

~~Grey~~ text indicates soil sample removed during excavation activities

ENSOLUM

APPENDIX A

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: PH01	Date: 2/6/2023
	Site Name: ADU 624	
	Incident Number: NAPP2302355577	
	Job Number: 03C1558180	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: KP	Method: Trackhoe
Coordinates: 32.53388, -104.20765	Hole Diameter: NA	Total Depth: 19'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% error factor is included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
							SP	0-1' SAND, red, fine, poorly sorted, sub-rounded, very stained, very odorous.
D	1,713	674	Y	PH01	0.5	0.5		
D	2749	232	Y			1		1-2' SAND, red, fine, poorly sorted, sub-rounded grains, slightly stained, odorous.
D	4860	217	N			2		2-8' SAND, tan, fine grained, poorly sorted, sub-rounded grains, no stain, odorous.
D	5756	132	N			3		
D	7946	18	N	PH01A	4	4		
D	5756	8.9	N			6		
D	4452	13.5	N			8		8-10' SAND, red, fine grained, poorly sorted, sub-rounded grains, no stain, odorous
M	7946	12.4	N			10	SP-SM	10-12' SAND, tan, clay/sand mix, poorly sorted, sub-rounded grains, no stain, sulfur odor.
M	4860	5.6	N			12		12-16' SAND, red, clay/sand mix, poorly sorted, sub-rounded grains, no stain, sulfur odor.
M	5756	2.4	N			14		
M	4860	1.8	N	PH01B	16	16		16-18' SAND, red, silt/sand mix, poorly sorted, sub-rounded grains, no stain, sulfur odor.
D	5756	2.3	N			18		18-19' SAND, tan/grey, clay/sand mix, poorly sorted, sub-rounded grains, no stain, sulfur odor.
D	3292	0.9	N	PH01C	19	19		
							TD	Total Depth @ 19' bgs

ENSOLUM

	Sample Name: PH02	Date: 2/6/2023
	Site Name: ADU 624	
	Incident Number: NAPP2302355577	
	Job Number: 03C1558180	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: KP	Method: Trackhoe
Coordinates: 32.53388, -104.20765	Hole Diameter: NA	Total Depth: 19'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% error factor is included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
							SP	0-2' SAND, red, fine, poorly sorted, sub-rounded, very stained, very odorous.
D	1,713	1357	Y	PH02	0.5	0.5		
D	3365	943	Y			1		
D	3365	201	N			2		2-6' SAND, tan, fine grained, poorly sorted, sub-rounded grains, no stain, odorous.
D	4065	35.5	N			3		
D	5292	10.8	N	PH02A	4	4		
D	2200	40.1	N			6	CCHE	6-10' CCHE, brown sand/caliche mix, poorly sorted, sub-rounded grains, no stain, no odor.
D	280	7.5	N	PH02B	8	8		
	280	1.5		PH02C	10	10		
							TD	Total Depth @ 10'

ENSOLUM	Sample Name: PH03	Date: 2/6/2023
	Site Name: ADU 624	
	Incident Number: NAPP2302355577	
	Job Number: 03C1558180	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: KP	Method: Trackhoe
Coordinates: 32.53388, -104.20765	Hole Diameter: NA	Total Depth: 19'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% error factor is included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	2,139	5.9	N	PH03	26	26	CCHE	26-30' CCHE, red/brown sand/ caliche mix, poorly sorted, sub-angular grains, no stain, no odor.
D	520.8	2.7	N	PH03A	28	28		
D	520.8	0.4	N	PH03B	30	30		
							TD	Total Depth @ 30'

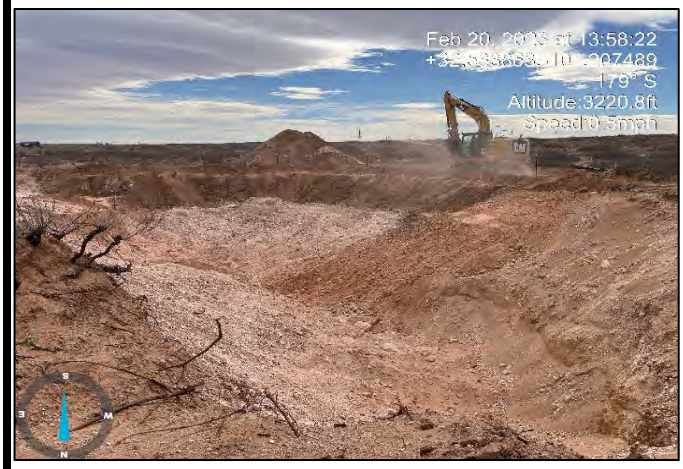
ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

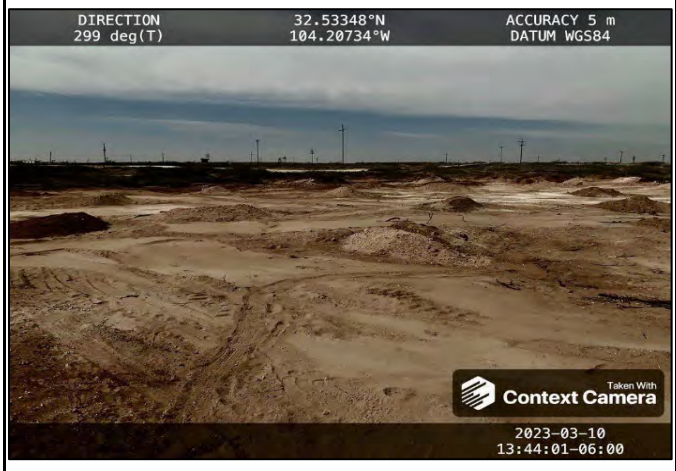
Photographic Log
XTO Energy Inc.
Avalon Delaware Unit 624
Incident Number NAPP2302355577



Photograph: 5 Date: 2/20/2023
Description: Southern end of excavation.
View: South

Photograph: 6 Date: 2/22/2023
Description: Southern end of excavation.
View: West

Photograph: 7 Date: 3/9/2023
Description: Installation of liner.
View: South



Photograph: 8 Date: 3/10/2023
Description: Backfill and recontour of Site.
View: East

ENSOLUM

Photographic Log
XTO Energy Inc.
Avalon Delaware Unit 624
Incident Number NAPP2302355577

Photograph: 1 Date: 2/6/2023
Description: Release extent and staining in pasture
View: Southeast

Photograph: 2 Date: 2/6/2023
Description: Release extent inside existing excavation.
View: Northwest

Photograph: 3 Date: 2/20/2023
Description: Excavation of northern end of release.
View: West

Photograph: 4 Date: 2/20/2023
Description: Excavation of northern end of release.
View: Northwest

ENSOLUM

APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 2/14/2023 8:28:09 AM

JOB DESCRIPTION

ADU 641
SDG NUMBER 03C1558150

JOB NUMBER

890-4038-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

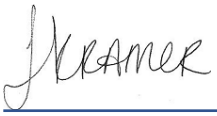
See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

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

Authorization



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2/14/2023 8:28:09 AM

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

Client: Ensolum
Project/Site: ADU 641

Laboratory Job ID: 890-4038-1
SDG: 03C1558150

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery 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
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/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

Job ID: 890-4038-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4038-1

Receipt
The samples were received on 2/6/2023 3:45 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 5.4°C

Receipt Exceptions
The following were received and analyzed from an unpreserved bulk soil jar: PH01 (890-4038-1), PH01A (890-4038-2), PH01B (890-4038-3), PH01C (890-4038-4), PH02 (890-4038-5), PH02A (890-4038-6), PH02B (890-4038-7) and PH02C (HOLD) (890-4038-8).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: PH01 (890-4038-1), PH01A (890-4038-2) and PH02 (890-4038-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-45779 and analytical batch 880-45814 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH01 (890-4038-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH01 (890-4038-1). 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.

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-45704 and analytical batch 880-45735 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-3975-A-1-D MS) and (890-3975-A-1-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: PH01 (890-4038-1) and PH02 (890-4038-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-45704 and analytical batch 880-45735 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.

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: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

Client Sample ID: PH01

Lab Sample ID: 890-4038-1
Matrix: Solid
Date Collected: 02/06/23 09:10
Date Received: 02/06/23 15:45
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.174		0.0401		mg/Kg		02/08/23 11:21	02/09/23 13:31	20
Toluene	0.777		0.0996		mg/Kg		02/13/23 08:16	02/13/23 14:46	50
Ethylbenzene	7.48		0.0996		mg/Kg		02/13/23 08:16	02/13/23 14:46	50
m-Xylene & p-Xylene	6.14		0.199		mg/Kg		02/13/23 08:16	02/13/23 14:46	50
o-Xylene	8.12		0.0996		mg/Kg		02/13/23 08:16	02/13/23 14:46	50
Xylenes, Total	14.3		0.199		mg/Kg		02/13/23 08:16	02/13/23 14:46	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*349*	*S1+*	*70 - 130*	*02/08/23 11:21*	*02/09/23 13:31*	*20*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*02/08/23 11:21*	*02/09/23 13:31*	*20*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	22.7		0.199		mg/Kg			02/10/23 11:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	2180		49.9		mg/Kg			02/09/23 09:48	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	298		49.9		mg/Kg		02/07/23 13:19	02/09/23 05:17	1
Diesel Range Organics (Over C10-C28)	1750		49.9		mg/Kg		02/07/23 13:19	02/09/23 05:17	1
Oil Range Organics (Over C28-C36)	128		49.9		mg/Kg		02/07/23 13:19	02/09/23 05:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*25*	*S1-*	*70 - 130*	*02/07/23 13:19*	*02/09/23 05:17*	*1*
o-Terphenyl	*31*	*S1-*	*70 - 130*	*02/07/23 13:19*	*02/09/23 05:17*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1660		25.1		mg/Kg			02/08/23 17:03	5

Client Sample ID: PH01A

Lab Sample ID: 890-4038-2
Matrix: Solid
Date Collected: 02/06/23 09:30
Date Received: 02/06/23 15:45
Sample Depth: 4

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0571		0.0398		mg/Kg		02/08/23 11:21	02/09/23 13:52	20
Toluene	0.195		0.0398		mg/Kg		02/08/23 11:21	02/09/23 13:52	20
Ethylbenzene	0.0470		0.0398		mg/Kg		02/08/23 11:21	02/09/23 13:52	20
m-Xylene & p-Xylene	<0.0797	U	0.0797		mg/Kg		02/08/23 11:21	02/09/23 13:52	20
o-Xylene	0.0877		0.0398		mg/Kg		02/08/23 11:21	02/09/23 13:52	20
Xylenes, Total	0.0877		0.0797		mg/Kg		02/08/23 11:21	02/09/23 13:52	20

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

Client Sample ID: PH01A

Date Collected: 02/06/23 09:30
Date Received: 02/06/23 15:45
Sample Depth: 4

Lab Sample ID: 890-4038-2

Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*137*	*S1+*	*70 - 130*	*02/08/23 11:21*	*02/09/23 13:52*	*20*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*02/08/23 11:21*	*02/09/23 13:52*	*20*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.387**		0.0797	mg/Kg			02/10/23 11:22	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**84.9**		49.9	mg/Kg			02/09/23 09:48	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	<49.9	U	49.9	mg/Kg		02/07/23 13:19	02/09/23 03:30	1
Diesel Range Organics (Over C10-C28)	**84.9**		49.9	mg/Kg		02/07/23 13:19	02/09/23 03:30	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/07/23 13:19	02/09/23 03:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*02/07/23 13:19*	*02/09/23 03:30*	*1*
o-Terphenyl	*118*		*70 - 130*	*02/07/23 13:19*	*02/09/23 03:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5780**		50.2	mg/Kg			02/08/23 17:21	10

Client Sample ID: PH01B

Date Collected: 02/06/23 10:00
Date Received: 02/06/23 15:45
Sample Depth: 16

Lab Sample ID: 890-4038-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U F1	0.00199	mg/Kg		02/08/23 11:21	02/09/23 11:08	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/08/23 11:21	02/09/23 11:08	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/08/23 11:21	02/09/23 11:08	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/08/23 11:21	02/09/23 11:08	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/08/23 11:21	02/09/23 11:08	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/08/23 11:21	02/09/23 11:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*02/08/23 11:21*	*02/09/23 11:08*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*02/08/23 11:21*	*02/09/23 11:08*	*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			02/10/23 11:22	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			02/09/23 09:48	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

Client Sample ID: PH01B

Lab Sample ID: 890-4038-3
Matrix: Solid
Date Collected: 02/06/23 10:00
Date Received: 02/06/23 15:45
Sample Depth: 16

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		02/07/23 13:19	02/09/23 03:52	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/07/23 13:19	02/09/23 03:52	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/07/23 13:19	02/09/23 03:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*02/07/23 13:19*	*02/09/23 03:52*	*1*
o-Terphenyl	*101*		*70 - 130*	*02/07/23 13:19*	*02/09/23 03:52*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4800**		49.9		mg/Kg			02/08/23 17:27	10

Client Sample ID: PH01C

Lab Sample ID: 890-4038-4
Matrix: Solid
Date Collected: 02/06/23 10:10
Date Received: 02/06/23 15:45
Sample Depth: 19

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		02/08/23 11:21	02/09/23 11:28	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/08/23 11:21	02/09/23 11:28	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/08/23 11:21	02/09/23 11:28	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/08/23 11:21	02/09/23 11:28	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/08/23 11:21	02/09/23 11:28	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/08/23 11:21	02/09/23 11:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*02/08/23 11:21*	*02/09/23 11:28*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*02/08/23 11:21*	*02/09/23 11:28*	*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			02/10/23 11:22	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			02/09/23 09:48	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	<50.0	U	50.0		mg/Kg		02/07/23 13:19	02/09/23 04:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/07/23 13:19	02/09/23 04:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/07/23 13:19	02/09/23 04:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*02/07/23 13:19*	*02/09/23 04:13*	*1*
o-Terphenyl	*105*		*70 - 130*	*02/07/23 13:19*	*02/09/23 04:13*	*1*

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

Client Sample ID: PH01C
Date Collected: 02/06/23 10:10
Date Received: 02/06/23 15:45
Sample Depth: 19

Lab Sample ID: 890-4038-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3440		50.5		mg/Kg			02/08/23 17:48	10

Client Sample ID: PH02
Date Collected: 02/06/23 12:00
Date Received: 02/06/23 15:45
Sample Depth: 0.5

Lab Sample ID: 890-4038-5
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.541		0.0401		mg/Kg		02/08/23 11:21	02/09/23 14:12	20
Toluene	6.74		0.0401		mg/Kg		02/08/23 11:21	02/09/23 14:12	20
Ethylbenzene	7.90		0.0401		mg/Kg		02/08/23 11:21	02/09/23 14:12	20
m-Xylene & p-Xylene	6.52		0.0802		mg/Kg		02/08/23 11:21	02/09/23 14:12	20
o-Xylene	0.327		0.0401		mg/Kg		02/08/23 11:21	02/09/23 14:12	20
Xylenes, Total	6.85		0.0802		mg/Kg		02/08/23 11:21	02/09/23 14:12	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*209*	*S1+*	*70 - 130*	*02/08/23 11:21*	*02/09/23 14:12*	*20*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*02/08/23 11:21*	*02/09/23 14:12*	*20*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	22.0		0.0802		mg/Kg			02/10/23 11:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	1400		50.0		mg/Kg			02/09/23 09:48	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	317		50.0		mg/Kg		02/07/23 13:19	02/09/23 05:39	1
Diesel Range Organics (Over C10-C28)	966		50.0		mg/Kg		02/07/23 13:19	02/09/23 05:39	1
Oil Range Organics (Over C28-C36)	120		50.0		mg/Kg		02/07/23 13:19	02/09/23 05:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*20*	*S1-*	*70 - 130*	*02/07/23 13:19*	*02/09/23 05:39*	*1*
o-Terphenyl	*19*	*S1-*	*70 - 130*	*02/07/23 13:19*	*02/09/23 05:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	616		5.04		mg/Kg			02/08/23 17:55	1

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

Client Sample ID: PH02A

Lab Sample ID: 890-4038-6
Matrix: Solid
Date Collected: 02/06/23 12:20
Date Received: 02/06/23 15:45
Sample Depth: 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		02/08/23 11:21	02/09/23 11:49	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/08/23 11:21	02/09/23 11:49	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/08/23 11:21	02/09/23 11:49	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/08/23 11:21	02/09/23 11:49	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/08/23 11:21	02/09/23 11:49	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/08/23 11:21	02/09/23 11:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*02/08/23 11:21*	*02/09/23 11:49*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*02/08/23 11:21*	*02/09/23 11:49*	*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			02/10/23 11:22	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			02/09/23 09:48	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	<50.0	U	50.0		mg/Kg		02/07/23 13:19	02/09/23 04:34	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/07/23 13:19	02/09/23 04:34	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/07/23 13:19	02/09/23 04:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*02/07/23 13:19*	*02/09/23 04:34*	*1*
o-Terphenyl	*103*		*70 - 130*	*02/07/23 13:19*	*02/09/23 04:34*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3130**		25.0		mg/Kg			02/08/23 18:13	5

Client Sample ID: PH02B

Lab Sample ID: 890-4038-7
Matrix: Solid
Date Collected: 02/06/23 12:30
Date Received: 02/06/23 15:45
Sample Depth: 8

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		02/08/23 11:21	02/09/23 12:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/08/23 11:21	02/09/23 12:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/08/23 11:21	02/09/23 12:09	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/08/23 11:21	02/09/23 12:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/08/23 11:21	02/09/23 12:09	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/08/23 11:21	02/09/23 12:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*02/08/23 11:21*	*02/09/23 12:09*	*1*

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

Client Sample ID: PH02B

Date Collected: 02/06/23 12:30
Date Received: 02/06/23 15:45
Sample Depth: 8

Lab Sample ID: 890-4038-7

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*02/08/23 11:21*	*02/09/23 12:09*	*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			02/10/23 11:22	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			02/09/23 09:48	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	<49.9	U	49.9		mg/Kg		02/07/23 13:19	02/09/23 04:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/07/23 13:19	02/09/23 04:56	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/07/23 13:19	02/09/23 04:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*02/07/23 13:19*	*02/09/23 04:56*	*1*
o-Terphenyl	*100*		*70 - 130*	*02/07/23 13:19*	*02/09/23 04:56*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**365**		5.00		mg/Kg			02/08/23 18:19	1

Surrogate Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

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)
880-24604-A-1-D MS	Matrix Spike	94	105
880-24604-A-1-E MSD	Matrix Spike Duplicate	100	103
890-4038-1	PH01	349 S1+	98
890-4038-2	PH01A	137 S1+	90
890-4038-3	PH01B	89	90
890-4038-3 MS	PH01B	125	99
890-4038-3 MSD	PH01B	115	99
890-4038-4	PH01C	90	92
890-4038-5	PH02	209 S1+	82
890-4038-6	PH02A	87	91
890-4038-7	PH02B	85	90
LCS 880-45779/1-A	Lab Control Sample	117	99
LCS 880-46084/1-A	Lab Control Sample	113	105
LCSD 880-45779/2-A	Lab Control Sample Dup	118	101
LCSD 880-46084/2-A	Lab Control Sample Dup	108	108
MB 880-45779/5-A	Method Blank	74	91
MB 880-46084/5-A	Method Blank	75	92

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)
890-3975-A-1-D MS	Matrix Spike	191 S1+	194 S1+
890-3975-A-1-E MSD	Matrix Spike Duplicate	207 S1+	204 S1+
890-4038-1	PH01	25 S1-	31 S1-
890-4038-2	PH01A	106	118
890-4038-3	PH01B	93	101
890-4038-4	PH01C	94	105
890-4038-5	PH02	20 S1-	19 S1-
890-4038-6	PH02A	94	103
890-4038-7	PH02B	91	100
LCS 880-45704/2-A	Lab Control Sample	104	114
LCSD 880-45704/3-A	Lab Control Sample Dup	100	110
MB 880-45704/1-A	Method Blank	116	132 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-45779/5-A
Matrix: Solid
Analysis Batch: 45814

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45779

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/08/23 11:21	02/09/23 10:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/08/23 11:21	02/09/23 10:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/08/23 11:21	02/09/23 10:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/08/23 11:21	02/09/23 10:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/08/23 11:21	02/09/23 10:46	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/08/23 11:21	02/09/23 10:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*02/08/23 11:21*	*02/09/23 10:46*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*02/08/23 11:21*	*02/09/23 10:46*	*1*

Lab Sample ID: LCS 880-45779/1-A
Matrix: Solid
Analysis Batch: 45814

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45779

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08684		mg/Kg		87	70 - 130		
Toluene			0.100	0.09179		mg/Kg		92	70 - 130		
Ethylbenzene			0.100	0.1001		mg/Kg		100	70 - 130		
m-Xylene & p-Xylene			0.200	0.2172		mg/Kg		109	70 - 130		
o-Xylene			0.100	0.1087		mg/Kg		109	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 880-45779/2-A
Matrix: Solid
Analysis Batch: 45814

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45779

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09137		mg/Kg		91	70 - 130	5	35
Toluene			0.100	0.09454		mg/Kg		95	70 - 130	3	35
Ethylbenzene			0.100	0.1055		mg/Kg		106	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.2272		mg/Kg		114	70 - 130	5	35
o-Xylene			0.100	0.1137		mg/Kg		114	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-4038-3 MS
Matrix: Solid
Analysis Batch: 45814

Client Sample ID: PH01B
Prep Type: Total/NA
Prep Batch: 45779

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U F1	0.100	0.06882	F1	mg/Kg		69	70 - 130		
Toluene	<0.00199	U	0.100	0.08001		mg/Kg		80	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

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

Lab Sample ID: 890-4038-3 MS
Matrix: Solid
Analysis Batch: 45814

Client Sample ID: PH01B
Prep Type: Total/NA
Prep Batch: 45779

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.100	0.09036		mg/Kg		90	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.201	0.1983		mg/Kg		99	70 - 130
o-Xylene	<0.00199	U	0.100	0.09896		mg/Kg		99	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-4038-3 MSD
Matrix: Solid
Analysis Batch: 45814

Client Sample ID: PH01B
Prep Type: Total/NA
Prep Batch: 45779

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.0990	0.07887		mg/Kg		80	70 - 130	14	35
Toluene	<0.00199	U	0.0990	0.08065		mg/Kg		81	70 - 130	1	35
Ethylbenzene	<0.00199	U	0.0990	0.08785		mg/Kg		89	70 - 130	3	35
m-Xylene & p-Xylene	<0.00398	U	0.198	0.1859		mg/Kg		94	70 - 130	7	35
o-Xylene	<0.00199	U	0.0990	0.09214		mg/Kg		93	70 - 130	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: MB 880-46084/5-A
Matrix: Solid
Analysis Batch: 46087

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 46084

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/13/23 08:16	02/13/23 11:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/13/23 08:16	02/13/23 11:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/13/23 08:16	02/13/23 11:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/13/23 08:16	02/13/23 11:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/13/23 08:16	02/13/23 11:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/13/23 08:16	02/13/23 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*70 - 130*	*02/13/23 08:16*	*02/13/23 11:41*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*02/13/23 08:16*	*02/13/23 11:41*	*1*

Lab Sample ID: LCS 880-46084/1-A
Matrix: Solid
Analysis Batch: 46087

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46084

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1035		mg/Kg		104	70 - 130
Toluene	0.100	0.1023		mg/Kg		102	70 - 130
Ethylbenzene	0.100	0.1061		mg/Kg		106	70 - 130
m-Xylene & p-Xylene	0.200	0.2231		mg/Kg		112	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

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

Lab Sample ID: LCS 880-46084/1-A
Matrix: Solid
Analysis Batch: 46087

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46084

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.1105		mg/Kg		110	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 880-46084/2-A
Matrix: Solid
Analysis Batch: 46087

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 46084

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1020		mg/Kg		102	70 - 130	1	35
Toluene			0.100	0.09714		mg/Kg		97	70 - 130	5	35
Ethylbenzene			0.100	0.1008		mg/Kg		101	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.2130		mg/Kg		107	70 - 130	5	35
o-Xylene			0.100	0.1054		mg/Kg		105	70 - 130	5	35

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

Lab Sample ID: 880-24604-A-1-D MS
Matrix: Solid
Analysis Batch: 46087

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 46084

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U	0.0996	0.08015		mg/Kg		80	70 - 130		
Toluene	<0.00198	U	0.0996	0.07400		mg/Kg		74	70 - 130		
Ethylbenzene	<0.00198	U	0.0996	0.07278		mg/Kg		73	70 - 130		
m-Xylene & p-Xylene	<0.00396	U	0.199	0.1451		mg/Kg		73	70 - 130		
o-Xylene	<0.00198	U	0.0996	0.07151		mg/Kg		72	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 880-24604-A-1-E MSD
Matrix: Solid
Analysis Batch: 46087

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 46084

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.100	0.09265		mg/Kg		92	70 - 130	14	35
Toluene	<0.00198	U	0.100	0.08794		mg/Kg		88	70 - 130	17	35
Ethylbenzene	<0.00198	U	0.100	0.09075		mg/Kg		91	70 - 130	22	35
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1815		mg/Kg		91	70 - 130	22	35
o-Xylene	<0.00198	U	0.100	0.08889		mg/Kg		89	70 - 130	22	35

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

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

Lab Sample ID: 880-24604-A-1-E MSD
Matrix: Solid
Analysis Batch: 46087

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 46084

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

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

Lab Sample ID: MB 880-45704/1-A
Matrix: Solid
Analysis Batch: 45735

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45704

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		02/07/23 13:19	02/08/23 20:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/07/23 13:19	02/08/23 20:37	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/07/23 13:19	02/08/23 20:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	116		70 - 130	02/07/23 13:19	02/08/23 20:37	1
o-Terphenyl	132	S1+	70 - 130	02/07/23 13:19	02/08/23 20:37	1

Lab Sample ID: LCS 880-45704/2-A
Matrix: Solid
Analysis Batch: 45735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45704

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	860.6		mg/Kg		86	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	909.7		mg/Kg		91	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	114		70 - 130

Lab Sample ID: LCSD 880-45704/3-A
Matrix: Solid
Analysis Batch: 45735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45704

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	917.2		mg/Kg		92	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	932.0		mg/Kg		93	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	110		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

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

Lab Sample ID: 890-3975-A-1-D MS
Matrix: Solid
Analysis Batch: 45735

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45704

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 F1	995	1634	F1	mg/Kg		164	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U F1	995	1867	F1	mg/Kg		188	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*191*	*S1+*	*70 - 130*
o-Terphenyl	*194*	*S1+*	*70 - 130*

Lab Sample ID: 890-3975-A-1-E MSD
Matrix: Solid
Analysis Batch: 45735

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45704

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 F1	999	1813	F1	mg/Kg		181	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	<49.8	U F1	999	1990	F1	mg/Kg		199	70 - 130	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*207*	*S1+*	*70 - 130*
o-Terphenyl	*204*	*S1+*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-45808/1-A
Matrix: Solid
Analysis Batch: 45829

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/08/23 16:44	1

Lab Sample ID: LCS 880-45808/2-A
Matrix: Solid
Analysis Batch: 45829

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	239.1		mg/Kg		96	90 - 110

Lab Sample ID: LCSD 880-45808/3-A
Matrix: Solid
Analysis Batch: 45829

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	234.5		mg/Kg		94	90 - 110	2	20

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-4038-1 MS
Matrix: Solid
Analysis Batch: 45829

Client Sample ID: PH01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	1660		1260	2901		mg/Kg		99	90 - 110		

Lab Sample ID: 890-4038-1 MSD
Matrix: Solid
Analysis Batch: 45829

Client Sample ID: PH01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1660		1260	2917		mg/Kg		100	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

GC VOA

Prep Batch: 45779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4038-1	PH01	Total/NA	Solid	5035	
890-4038-2	PH01A	Total/NA	Solid	5035	
890-4038-3	PH01B	Total/NA	Solid	5035	
890-4038-4	PH01C	Total/NA	Solid	5035	
890-4038-5	PH02	Total/NA	Solid	5035	
890-4038-6	PH02A	Total/NA	Solid	5035	
890-4038-7	PH02B	Total/NA	Solid	5035	
MB 880-45779/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-45779/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-45779/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4038-3 MS	PH01B	Total/NA	Solid	5035	
890-4038-3 MSD	PH01B	Total/NA	Solid	5035	

Analysis Batch: 45814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4038-1	PH01	Total/NA	Solid	8021B	45779
890-4038-2	PH01A	Total/NA	Solid	8021B	45779
890-4038-3	PH01B	Total/NA	Solid	8021B	45779
890-4038-4	PH01C	Total/NA	Solid	8021B	45779
890-4038-5	PH02	Total/NA	Solid	8021B	45779
890-4038-6	PH02A	Total/NA	Solid	8021B	45779
890-4038-7	PH02B	Total/NA	Solid	8021B	45779
MB 880-45779/5-A	Method Blank	Total/NA	Solid	8021B	45779
LCS 880-45779/1-A	Lab Control Sample	Total/NA	Solid	8021B	45779
LCSD 880-45779/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	45779
890-4038-3 MS	PH01B	Total/NA	Solid	8021B	45779
890-4038-3 MSD	PH01B	Total/NA	Solid	8021B	45779

Analysis Batch: 45985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4038-1	PH01	Total/NA	Solid	Total BTEX	
890-4038-2	PH01A	Total/NA	Solid	Total BTEX	
890-4038-3	PH01B	Total/NA	Solid	Total BTEX	
890-4038-4	PH01C	Total/NA	Solid	Total BTEX	
890-4038-5	PH02	Total/NA	Solid	Total BTEX	
890-4038-6	PH02A	Total/NA	Solid	Total BTEX	
890-4038-7	PH02B	Total/NA	Solid	Total BTEX	

Prep Batch: 46084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4038-1	PH01	Total/NA	Solid	5035	
MB 880-46084/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-46084/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-46084/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-24604-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-24604-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 46087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4038-1	PH01	Total/NA	Solid	8021B	46084
MB 880-46084/5-A	Method Blank	Total/NA	Solid	8021B	46084

QC Association Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

GC VOA (Continued)

Analysis Batch: 46087 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-46084/1-A	Lab Control Sample	Total/NA	Solid	8021B	46084
LCSD 880-46084/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	46084
880-24604-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	46084
880-24604-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	46084

GC Semi VOA

Prep Batch: 45704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4038-1	PH01	Total/NA	Solid	8015NM Prep	
890-4038-2	PH01A	Total/NA	Solid	8015NM Prep	
890-4038-3	PH01B	Total/NA	Solid	8015NM Prep	
890-4038-4	PH01C	Total/NA	Solid	8015NM Prep	
890-4038-5	PH02	Total/NA	Solid	8015NM Prep	
890-4038-6	PH02A	Total/NA	Solid	8015NM Prep	
890-4038-7	PH02B	Total/NA	Solid	8015NM Prep	
MB 880-45704/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45704/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45704/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3975-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3975-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 45735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4038-1	PH01	Total/NA	Solid	8015B NM	45704
890-4038-2	PH01A	Total/NA	Solid	8015B NM	45704
890-4038-3	PH01B	Total/NA	Solid	8015B NM	45704
890-4038-4	PH01C	Total/NA	Solid	8015B NM	45704
890-4038-5	PH02	Total/NA	Solid	8015B NM	45704
890-4038-6	PH02A	Total/NA	Solid	8015B NM	45704
890-4038-7	PH02B	Total/NA	Solid	8015B NM	45704
MB 880-45704/1-A	Method Blank	Total/NA	Solid	8015B NM	45704
LCS 880-45704/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45704
LCSD 880-45704/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45704
890-3975-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	45704
890-3975-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45704

Analysis Batch: 45876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4038-1	PH01	Total/NA	Solid	8015 NM	
890-4038-2	PH01A	Total/NA	Solid	8015 NM	
890-4038-3	PH01B	Total/NA	Solid	8015 NM	
890-4038-4	PH01C	Total/NA	Solid	8015 NM	
890-4038-5	PH02	Total/NA	Solid	8015 NM	
890-4038-6	PH02A	Total/NA	Solid	8015 NM	
890-4038-7	PH02B	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 45808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4038-1	PH01	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

HPLC/IC (Continued)

Leach Batch: 45808 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4038-2	PH01A	Soluble	Solid	DI Leach	
890-4038-3	PH01B	Soluble	Solid	DI Leach	
890-4038-4	PH01C	Soluble	Solid	DI Leach	
890-4038-5	PH02	Soluble	Solid	DI Leach	
890-4038-6	PH02A	Soluble	Solid	DI Leach	
890-4038-7	PH02B	Soluble	Solid	DI Leach	
MB 880-45808/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-45808/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-45808/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4038-1 MS	PH01	Soluble	Solid	DI Leach	
890-4038-1 MSD	PH01	Soluble	Solid	DI Leach	

Analysis Batch: 45829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4038-1	PH01	Soluble	Solid	300.0	45808
890-4038-2	PH01A	Soluble	Solid	300.0	45808
890-4038-3	PH01B	Soluble	Solid	300.0	45808
890-4038-4	PH01C	Soluble	Solid	300.0	45808
890-4038-5	PH02	Soluble	Solid	300.0	45808
890-4038-6	PH02A	Soluble	Solid	300.0	45808
890-4038-7	PH02B	Soluble	Solid	300.0	45808
MB 880-45808/1-A	Method Blank	Soluble	Solid	300.0	45808
LCS 880-45808/2-A	Lab Control Sample	Soluble	Solid	300.0	45808
LCSD 880-45808/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	45808
890-4038-1 MS	PH01	Soluble	Solid	300.0	45808
890-4038-1 MSD	PH01	Soluble	Solid	300.0	45808

Lab Chronicle

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

Client Sample ID: PH01
Date Collected: 02/06/23 09:10
Date Received: 02/06/23 15:45

Lab Sample ID: 890-4038-1
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			4.99 g	5 mL	45779	02/08/23 11:21	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	45814	02/09/23 13:31	MNR	EET MID
Total/NA	Prep	5035			5.02 g	5 mL	46084	02/13/23 08:16	MNR	EET MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	46087	02/13/23 14:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45985	02/10/23 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			45876	02/09/23 09:48	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45704	02/07/23 13:19	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45735	02/09/23 05:17	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	45808	02/08/23 14:58	KS	EET MID
Soluble	Analysis	300.0		5			45829	02/08/23 17:03	CH	EET MID

Client Sample ID: PH01A
Date Collected: 02/06/23 09:30
Date Received: 02/06/23 15:45

Lab Sample ID: 890-4038-2
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			5.02 g	5 mL	45779	02/08/23 11:21	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	45814	02/09/23 13:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45985	02/10/23 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			45876	02/09/23 09:48	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45704	02/07/23 13:19	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45735	02/09/23 03:30	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	45808	02/08/23 14:58	KS	EET MID
Soluble	Analysis	300.0		10			45829	02/08/23 17:21	CH	EET MID

Client Sample ID: PH01B
Date Collected: 02/06/23 10:00
Date Received: 02/06/23 15:45

Lab Sample ID: 890-4038-3
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			5.03 g	5 mL	45779	02/08/23 11:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45814	02/09/23 11:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45985	02/10/23 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			45876	02/09/23 09:48	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45704	02/07/23 13:19	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45735	02/09/23 03:52	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	45808	02/08/23 14:58	KS	EET MID
Soluble	Analysis	300.0		10			45829	02/08/23 17:27	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

Client Sample ID: PH01C

Lab Sample ID: 890-4038-4
Matrix: Solid
Date Collected: 02/06/23 10:10
Date Received: 02/06/23 15:45

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	45779	02/08/23 11:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45814	02/09/23 11:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45985	02/10/23 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			45876	02/09/23 09:48	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45704	02/07/23 13:19	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45735	02/09/23 04:13	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	45808	02/08/23 14:58	KS	EET MID
Soluble	Analysis	300.0		10			45829	02/08/23 17:48	CH	EET MID

Client Sample ID: PH02

Lab Sample ID: 890-4038-5
Matrix: Solid
Date Collected: 02/06/23 12:00
Date Received: 02/06/23 15:45

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	45779	02/08/23 11:21	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	45814	02/09/23 14:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45985	02/10/23 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			45876	02/09/23 09:48	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45704	02/07/23 13:19	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45735	02/09/23 05:39	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	45808	02/08/23 14:58	KS	EET MID
Soluble	Analysis	300.0		1			45829	02/08/23 17:55	CH	EET MID

Client Sample ID: PH02A

Lab Sample ID: 890-4038-6
Matrix: Solid
Date Collected: 02/06/23 12:20
Date Received: 02/06/23 15:45

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	45779	02/08/23 11:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45814	02/09/23 11:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45985	02/10/23 11:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			45876	02/09/23 09:48	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45704	02/07/23 13:19	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45735	02/09/23 04:34	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	45808	02/08/23 14:58	KS	EET MID
Soluble	Analysis	300.0		5			45829	02/08/23 18:13	CH	EET MID

Client Sample ID: PH02B

Lab Sample ID: 890-4038-7
Matrix: Solid
Date Collected: 02/06/23 12:30
Date Received: 02/06/23 15:45

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	45779	02/08/23 11:21	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	45814	02/09/23 12:09	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			45985	02/10/23 11:22	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

Client Sample ID: PH02B

Date Collected: 02/06/23 12:30
Date Received: 02/06/23 15:45

Lab Sample ID: 890-4038-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			45876	02/09/23 09:48	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45704	02/07/23 13:19	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	45735	02/09/23 04:56	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	45808	02/08/23 14:58	KS	EET MID
Soluble	Analysis	300.0		1			45829	02/08/23 18:19	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: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

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	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

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: ADU 641

Job ID: 890-4038-1
SDG: 03C1558150

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4038-1	PH01	Solid	02/06/23 09:10	02/06/23 15:45	0.5
890-4038-2	PH01A	Solid	02/06/23 09:30	02/06/23 15:45	4
890-4038-3	PH01B	Solid	02/06/23 10:00	02/06/23 15:45	16
890-4038-4	PH01C	Solid	02/06/23 10:10	02/06/23 15:45	19
890-4038-5	PH02	Solid	02/06/23 12:00	02/06/23 15:45	0.5
890-4038-6	PH02A	Solid	02/06/23 12:20	02/06/23 15:45	4
890-4038-7	PH02B	Solid	02/06/23 12:30	02/06/23 15:45	8

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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: _____

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Project Manager:	Tavonna Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	337-257-8307	Email:	garrett.green@exxonmobil.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:	ADW 641	Turn Around	
Project Number:	03C1558140	☐ Routine ☑ Rush	
Project Location:	32.533, -104.2026	Due Date:	24 hr
Sampler's Name:	Kyle Parker	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:	TWM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.6
Total Containers:		Corrected Temperature:	5.4

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_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	Parameters: BTEX	TPH	Chlorides	Sample Comments
PH01	S	2/6/23	0910	0.5'	G	1		X	X	X	Incident #:
PH01A			0930	4'		1					nAPP2302355577
PH01B			1000	16'		1					cc:
PH01C			1010	19'		1					1136144001
PH02			1200	0.5'		1					
PH02A			1220	4'		1					tmorrissey@ensolum.com
PH02B			1230	8'		1					
PH02C(Add)	↓	↓	1235	10'	↓	1		↓	↓	↓	

890-4038 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag 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		5.2.1023 1545	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4038-1
SDG Number: 03C1558150

Login Number: 4038
List Number: 1
Creator: Clifton, Cloe

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: 890-4038-1
SDG Number: 03C1558150

Login Number: 4038
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/08/23 02:46 PM

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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 2/13/2023 7:38:37 PM

JOB DESCRIPTION

ADU 641
SDG NUMBER 03C1558180

JOB NUMBER

890-4051-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

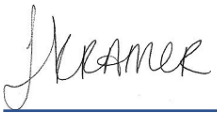
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



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2/13/2023 7:38:37 PM

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

Client: Ensolum
Project/Site: ADU 641

Laboratory Job ID: 890-4051-1
SDG: 03C1558180

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low 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/Site: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

Job ID: 890-4051-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4051-1

Receipt
The samples were received on 2/7/2023 3:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C

Receipt Exceptions
The following were received and analyzed from an unpreserved bulk soil jar: SW01 (890-4051-1), SW02 (890-4051-2), SW03 (890-4051-3), SW04 (890-4051-4) and SW05 (890-4051-5).

GC VOA
Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-46016 and analytical batch 880-46059 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SW01 (890-4051-1), SW02 (890-4051-2), SW03 (890-4051-3), SW04 (890-4051-4), SW05 (890-4051-5), (890-4049-A-1-B), (890-4049-A-1-C MS) and (890-4049-A-1-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: LCS biased low. Since only an acceptable LCS or LCSD is required per the method, the data has been qualified and reported.(LCS 880-45928/2-A)

Method 8015MOD_NM: Spike compounds were inadvertently omitted during the extraction process for the matrix spike/matrix spike duplicate (MS/MSD); therefore, matrix spike recoveries are unavailable for preparation batch 880-45928 and analytical batch 880-46064. The associated laboratory control sample (LCS) met acceptance criteria.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-45902 and analytical batch 880-45920 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was 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: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

Client Sample ID: SW01

Lab Sample ID: 890-4051-1
Matrix: Solid
Date Collected: 02/07/23 13:20
Date Received: 02/07/23 15:05
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		02/10/23 14:55	02/11/23 19:27	1
Toluene	<0.00199	U *-	0.00199		mg/Kg		02/10/23 14:55	02/11/23 19:27	1
Ethylbenzene	<0.00199	U *-	0.00199		mg/Kg		02/10/23 14:55	02/11/23 19:27	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/10/23 14:55	02/11/23 19:27	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/10/23 14:55	02/11/23 19:27	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/10/23 14:55	02/11/23 19:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*02/10/23 14:55*	*02/11/23 19:27*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*02/10/23 14:55*	*02/11/23 19:27*	*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			02/13/23 19:39	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			02/13/23 17:59	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 *- *1	49.9		mg/Kg		02/09/23 17:25	02/12/23 15:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U *- *1	49.9		mg/Kg		02/09/23 17:25	02/12/23 15:33	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/09/23 17:25	02/12/23 15:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*2*	*S1-*	*70 - 130*	*02/09/23 17:25*	*02/12/23 15:33*	*1*
o-Terphenyl	*0.6*	*S1-*	*70 - 130*	*02/09/23 17:25*	*02/12/23 15:33*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.83**	**F1**	4.97		mg/Kg			02/09/23 19:26	1

Client Sample ID: SW02

Lab Sample ID: 890-4051-2
Matrix: Solid
Date Collected: 02/07/23 13:25
Date Received: 02/07/23 15:05
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		02/10/23 14:55	02/11/23 19:47	1
Toluene	<0.00199	U *-	0.00199		mg/Kg		02/10/23 14:55	02/11/23 19:47	1
Ethylbenzene	<0.00199	U *-	0.00199		mg/Kg		02/10/23 14:55	02/11/23 19:47	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/10/23 14:55	02/11/23 19:47	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/10/23 14:55	02/11/23 19:47	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/10/23 14:55	02/11/23 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*02/10/23 14:55*	*02/11/23 19:47*	*1*

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

Client Sample ID: SW02

Lab Sample ID: 890-4051-2
Matrix: Solid
Date Collected: 02/07/23 13:25
Date Received: 02/07/23 15:05
Sample Depth: 0 - 4

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*02/10/23 14:55*	*02/11/23 19:47*	*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			02/13/23 19:39	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			02/13/23 17:59	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 *- *1	50.0	mg/Kg		02/09/23 17:25	02/12/23 15:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U *- *1	50.0	mg/Kg		02/09/23 17:25	02/12/23 15:55	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/09/23 17:25	02/12/23 15:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*3*	*S1-*	*70 - 130*	*02/09/23 17:25*	*02/12/23 15:55*	*1*
o-Terphenyl	*0.6*	*S1-*	*70 - 130*	*02/09/23 17:25*	*02/12/23 15:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			02/09/23 19:45	1

Client Sample ID: SW03

Lab Sample ID: 890-4051-3
Matrix: Solid
Date Collected: 02/07/23 13:30
Date Received: 02/07/23 15:05
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		02/10/23 14:55	02/11/23 21:37	1
Toluene	<0.00199	U *-	0.00199	mg/Kg		02/10/23 14:55	02/11/23 21:37	1
Ethylbenzene	<0.00199	U *-	0.00199	mg/Kg		02/10/23 14:55	02/11/23 21:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/10/23 14:55	02/11/23 21:37	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/10/23 14:55	02/11/23 21:37	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/10/23 14:55	02/11/23 21:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*02/10/23 14:55*	*02/11/23 21:37*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*02/10/23 14:55*	*02/11/23 21:37*	*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			02/13/23 19:39	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			02/13/23 17:59	1

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

Client Sample ID: SW03

Lab Sample ID: 890-4051-3
Matrix: Solid
Date Collected: 02/07/23 13:30
Date Received: 02/07/23 15:05
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 *- *1	49.9		mg/Kg		02/09/23 17:25	02/12/23 16:17	1
Diesel Range Organics (Over C10-C28)	<49.9	U *- *1	49.9		mg/Kg		02/09/23 17:25	02/12/23 16:17	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/09/23 17:25	02/12/23 16:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*2*	*S1-*	*70 - 130*	*02/09/23 17:25*	*02/12/23 16:17*	*1*
o-Terphenyl	*0.5*	*S1-*	*70 - 130*	*02/09/23 17:25*	*02/12/23 16:17*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.99	U	4.99		mg/Kg			02/09/23 19:51	1

Client Sample ID: SW04

Lab Sample ID: 890-4051-4
Matrix: Solid
Date Collected: 02/07/23 13:35
Date Received: 02/07/23 15:05
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		02/10/23 14:55	02/11/23 21:58	1
Toluene	<0.00200	U *-	0.00200		mg/Kg		02/10/23 14:55	02/11/23 21:58	1
Ethylbenzene	<0.00200	U *-	0.00200		mg/Kg		02/10/23 14:55	02/11/23 21:58	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/10/23 14:55	02/11/23 21:58	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/10/23 14:55	02/11/23 21:58	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/10/23 14:55	02/11/23 21:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*02/10/23 14:55*	*02/11/23 21:58*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*02/10/23 14:55*	*02/11/23 21:58*	*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			02/13/23 19:39	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			02/13/23 17:59	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 *- *1	50.0		mg/Kg		02/09/23 17:25	02/12/23 16:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U *- *1	50.0		mg/Kg		02/09/23 17:25	02/12/23 16:38	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/09/23 17:25	02/12/23 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*3*	*S1-*	*70 - 130*	*02/09/23 17:25*	*02/12/23 16:38*	*1*
o-Terphenyl	*0.3*	*S1-*	*70 - 130*	*02/09/23 17:25*	*02/12/23 16:38*	*1*

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

Client Sample ID: SW04

Lab Sample ID: 890-4051-4
Matrix: Solid
Date Collected: 02/07/23 13:35
Date Received: 02/07/23 15:05
Sample Depth: 0 - 4

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.95	U	4.95		mg/Kg			02/09/23 20:10	1

Client Sample ID: SW05

Lab Sample ID: 890-4051-5
Matrix: Solid
Date Collected: 02/07/23 13:40
Date Received: 02/07/23 15:05
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		02/10/23 14:55	02/11/23 22:18	1
Toluene	<0.00200	U *-	0.00200		mg/Kg		02/10/23 14:55	02/11/23 22:18	1
Ethylbenzene	<0.00200	U *-	0.00200		mg/Kg		02/10/23 14:55	02/11/23 22:18	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		02/10/23 14:55	02/11/23 22:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/10/23 14:55	02/11/23 22:18	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/10/23 14:55	02/11/23 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*02/10/23 14:55*	*02/11/23 22:18*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*02/10/23 14:55*	*02/11/23 22:18*	*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			02/13/23 19:39	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			02/13/23 17:59	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 *- *1	49.9		mg/Kg		02/09/23 17:25	02/12/23 17:21	1
Diesel Range Organics (Over C10-C28)	<49.9	U *- *1	49.9		mg/Kg		02/09/23 17:25	02/12/23 17:21	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/09/23 17:25	02/12/23 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*2*	*S1-*	*70 - 130*	*02/09/23 17:25*	*02/12/23 17:21*	*1*
o-Terphenyl	*0.5*	*S1-*	*70 - 130*	*02/09/23 17:25*	*02/12/23 17:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.82**		4.95		mg/Kg			02/09/23 20:16	1

Surrogate Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

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)
890-4047-A-1-C MS	Matrix Spike	113	112
890-4047-A-1-D MSD	Matrix Spike Duplicate	109	112
890-4051-1	SW01	121	111
890-4051-2	SW02	122	108
890-4051-3	SW03	119	108
890-4051-4	SW04	120	105
890-4051-5	SW05	122	107
LCS 880-46016/1-A	Lab Control Sample	108	110
LCSD 880-46016/2-A	Lab Control Sample Dup	114	110
MB 880-46016/5-A	Method Blank	111	105

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)
890-4049-A-1-C MS	Matrix Spike	2 S1-	0.4 S1-
890-4049-A-1-D MSD	Matrix Spike Duplicate	2 S1-	0.6 S1-
890-4051-1	SW01	2 S1-	0.6 S1-
890-4051-2	SW02	3 S1-	0.6 S1-
890-4051-3	SW03	2 S1-	0.5 S1-
890-4051-4	SW04	3 S1-	0.3 S1-
890-4051-5	SW05	2 S1-	0.5 S1-
LCS 880-45928/2-A	Lab Control Sample	81	83
LCSD 880-45928/3-A	Lab Control Sample Dup	93	100
MB 880-45928/1-A	Method Blank	87	105

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-46016/5-A
Matrix: Solid
Analysis Batch: 46059

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 46016

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/10/23 14:55	02/11/23 16:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/10/23 14:55	02/11/23 16:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/10/23 14:55	02/11/23 16:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/10/23 14:55	02/11/23 16:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/10/23 14:55	02/11/23 16:15	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/10/23 14:55	02/11/23 16:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*02/10/23 14:55*	*02/11/23 16:15*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*02/10/23 14:55*	*02/11/23 16:15*	*1*

Lab Sample ID: LCS 880-46016/1-A
Matrix: Solid
Analysis Batch: 46059

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46016

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.07008		mg/Kg		70	70 - 130		
Toluene			0.100	0.06866	*-	mg/Kg		69	70 - 130		
Ethylbenzene			0.100	0.06746	*-	mg/Kg		67	70 - 130		
m-Xylene & p-Xylene			0.200	0.1444		mg/Kg		72	70 - 130		
o-Xylene			0.100	0.07197		mg/Kg		72	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: LCSD 880-46016/2-A
Matrix: Solid
Analysis Batch: 46059

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 46016

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.07747		mg/Kg		77	70 - 130	10	35
Toluene			0.100	0.07237		mg/Kg		72	70 - 130	5	35
Ethylbenzene			0.100	0.07187		mg/Kg		72	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1528		mg/Kg		76	70 - 130	6	35
o-Xylene			0.100	0.07577		mg/Kg		76	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 890-4047-A-1-C MS
Matrix: Solid
Analysis Batch: 46059

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 46016

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.0990	0.1079		mg/Kg		109	70 - 130		
Toluene	<0.00201	U *-	0.0990	0.1062		mg/Kg		107	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

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

Lab Sample ID: 890-4047-A-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46059 — **Prep Batch: 46016**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U *-	0.0990	0.1065		mg/Kg		108	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.198	0.2259		mg/Kg		114	70 - 130
o-Xylene	<0.00201	U	0.0990	0.1081		mg/Kg		109	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 890-4047-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46059 — **Prep Batch: 46016**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0998	0.1140		mg/Kg		114	70 - 130	6	35
Toluene	<0.00201	U *-	0.0998	0.1074		mg/Kg		108	70 - 130	1	35
Ethylbenzene	<0.00201	U *-	0.0998	0.1067		mg/Kg		107	70 - 130	0	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.2247		mg/Kg		113	70 - 130	1	35
o-Xylene	<0.00201	U	0.0998	0.1069		mg/Kg		107	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

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

Lab Sample ID: MB 880-45928/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46064 — **Prep Batch: 45928**

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		02/09/23 17:25	02/12/23 09:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/09/23 17:25	02/12/23 09:21	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/09/23 17:25	02/12/23 09:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*02/09/23 17:25*	*02/12/23 09:21*	*1*
o-Terphenyl	*105*		*70 - 130*	*02/09/23 17:25*	*02/12/23 09:21*	*1*

Lab Sample ID: LCS 880-45928/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46064 — **Prep Batch: 45928**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	628.6	*-	mg/Kg		63	70 - 130
Diesel Range Organics (Over C10-C28)			1000	649.0	*-	mg/Kg		65	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

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

Lab Sample ID: LCS 880-45928/2-A
Matrix: Solid
Analysis Batch: 46064

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45928

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	83		70 - 130

Lab Sample ID: LCSD 880-45928/3-A
Matrix: Solid
Analysis Batch: 46064

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45928

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	886.7	*1	mg/Kg		89	70 - 130	34	20
Diesel Range Organics (Over C10-C28)			1000	848.7	*1	mg/Kg		85	70 - 130	27	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	93		70 - 130
o-Terphenyl	100		70 - 130

Lab Sample ID: 890-4049-A-1-C MS
Matrix: Solid
Analysis Batch: 46064

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 45928

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 *- *1	998	<49.9	U F1	mg/Kg		0	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U F1 *- *1	998	<49.9	U F1	mg/Kg		0.2	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	2	S1-	70 - 130
o-Terphenyl	0.4	S1-	70 - 130

Lab Sample ID: 890-4049-A-1-D MSD
Matrix: Solid
Analysis Batch: 46064

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 45928

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 *- *1	997	<49.9	U F1	mg/Kg		1	70 - 130	NC	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1 *- *1	997	<49.9	U F1	mg/Kg		0.3	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	2	S1-	70 - 130
o-Terphenyl	0.6	S1-	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-45902/1-A
Matrix: Solid
Analysis Batch: 45920

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/09/23 17:42	1

Lab Sample ID: LCS 880-45902/2-A
Matrix: Solid
Analysis Batch: 45920

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	232.7		mg/Kg		93	90 - 110		

Lab Sample ID: LCSD 880-45902/3-A
Matrix: Solid
Analysis Batch: 45920

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	232.8		mg/Kg		93	90 - 110	0	20

Lab Sample ID: 890-4051-1 MS
Matrix: Solid
Analysis Batch: 45920

Client Sample ID: SW01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	6.83	F1	249	220.1	F1	mg/Kg		86	90 - 110		

Lab Sample ID: 890-4051-1 MSD
Matrix: Solid
Analysis Batch: 45920

Client Sample ID: SW01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	6.83	F1	249	220.2	F1	mg/Kg		86	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

GC VOA

Prep Batch: 46016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4051-1	SW01	Total/NA	Solid	5035	
890-4051-2	SW02	Total/NA	Solid	5035	
890-4051-3	SW03	Total/NA	Solid	5035	
890-4051-4	SW04	Total/NA	Solid	5035	
890-4051-5	SW05	Total/NA	Solid	5035	
MB 880-46016/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-46016/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-46016/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4047-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-4047-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 46059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4051-1	SW01	Total/NA	Solid	8021B	46016
890-4051-2	SW02	Total/NA	Solid	8021B	46016
890-4051-3	SW03	Total/NA	Solid	8021B	46016
890-4051-4	SW04	Total/NA	Solid	8021B	46016
890-4051-5	SW05	Total/NA	Solid	8021B	46016
MB 880-46016/5-A	Method Blank	Total/NA	Solid	8021B	46016
LCS 880-46016/1-A	Lab Control Sample	Total/NA	Solid	8021B	46016
LCSD 880-46016/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	46016
890-4047-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	46016
890-4047-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	46016

Analysis Batch: 46244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4051-1	SW01	Total/NA	Solid	Total BTEX	
890-4051-2	SW02	Total/NA	Solid	Total BTEX	
890-4051-3	SW03	Total/NA	Solid	Total BTEX	
890-4051-4	SW04	Total/NA	Solid	Total BTEX	
890-4051-5	SW05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 45928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4051-1	SW01	Total/NA	Solid	8015NM Prep	
890-4051-2	SW02	Total/NA	Solid	8015NM Prep	
890-4051-3	SW03	Total/NA	Solid	8015NM Prep	
890-4051-4	SW04	Total/NA	Solid	8015NM Prep	
890-4051-5	SW05	Total/NA	Solid	8015NM Prep	
MB 880-45928/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-45928/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-45928/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4049-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4049-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 46064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4051-1	SW01	Total/NA	Solid	8015B NM	45928
890-4051-2	SW02	Total/NA	Solid	8015B NM	45928

QC Association Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

GC Semi VOA (Continued)

Analysis Batch: 46064 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4051-3	SW03	Total/NA	Solid	8015B NM	45928
890-4051-4	SW04	Total/NA	Solid	8015B NM	45928
890-4051-5	SW05	Total/NA	Solid	8015B NM	45928
MB 880-45928/1-A	Method Blank	Total/NA	Solid	8015B NM	45928
LCS 880-45928/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	45928
LCSD 880-45928/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	45928
890-4049-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	45928
890-4049-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	45928

Analysis Batch: 46211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4051-1	SW01	Total/NA	Solid	8015 NM	
890-4051-2	SW02	Total/NA	Solid	8015 NM	
890-4051-3	SW03	Total/NA	Solid	8015 NM	
890-4051-4	SW04	Total/NA	Solid	8015 NM	
890-4051-5	SW05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 45902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4051-1	SW01	Soluble	Solid	DI Leach	
890-4051-2	SW02	Soluble	Solid	DI Leach	
890-4051-3	SW03	Soluble	Solid	DI Leach	
890-4051-4	SW04	Soluble	Solid	DI Leach	
890-4051-5	SW05	Soluble	Solid	DI Leach	
MB 880-45902/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-45902/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-45902/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4051-1 MS	SW01	Soluble	Solid	DI Leach	
890-4051-1 MSD	SW01	Soluble	Solid	DI Leach	

Analysis Batch: 45920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4051-1	SW01	Soluble	Solid	300.0	45902
890-4051-2	SW02	Soluble	Solid	300.0	45902
890-4051-3	SW03	Soluble	Solid	300.0	45902
890-4051-4	SW04	Soluble	Solid	300.0	45902
890-4051-5	SW05	Soluble	Solid	300.0	45902
MB 880-45902/1-A	Method Blank	Soluble	Solid	300.0	45902
LCS 880-45902/2-A	Lab Control Sample	Soluble	Solid	300.0	45902
LCSD 880-45902/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	45902
890-4051-1 MS	SW01	Soluble	Solid	300.0	45902
890-4051-1 MSD	SW01	Soluble	Solid	300.0	45902

Lab Chronicle

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

Client Sample ID: SW01

Lab Sample ID: 890-4051-1
Matrix: Solid
Date Collected: 02/07/23 13:20
Date Received: 02/07/23 15:05

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	46016	02/10/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46059	02/11/23 19:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46244	02/13/23 19:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			46211	02/13/23 17:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45928	02/09/23 17:25	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46064	02/12/23 15:33	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	45902	02/09/23 14:14	KS	EET MID
Soluble	Analysis	300.0		1			45920	02/09/23 19:26	CH	EET MID

Client Sample ID: SW02

Lab Sample ID: 890-4051-2
Matrix: Solid
Date Collected: 02/07/23 13:25
Date Received: 02/07/23 15:05

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	46016	02/10/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46059	02/11/23 19:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46244	02/13/23 19:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			46211	02/13/23 17:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45928	02/09/23 17:25	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46064	02/12/23 15:55	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	45902	02/09/23 14:14	KS	EET MID
Soluble	Analysis	300.0		1			45920	02/09/23 19:45	CH	EET MID

Client Sample ID: SW03

Lab Sample ID: 890-4051-3
Matrix: Solid
Date Collected: 02/07/23 13:30
Date Received: 02/07/23 15:05

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	46016	02/10/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46059	02/11/23 21:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46244	02/13/23 19:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			46211	02/13/23 17:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45928	02/09/23 17:25	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46064	02/12/23 16:17	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	45902	02/09/23 14:14	KS	EET MID
Soluble	Analysis	300.0		1			45920	02/09/23 19:51	CH	EET MID

Client Sample ID: SW04

Lab Sample ID: 890-4051-4
Matrix: Solid
Date Collected: 02/07/23 13:35
Date Received: 02/07/23 15:05

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	46016	02/10/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46059	02/11/23 21:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46244	02/13/23 19:39	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

Client Sample ID: SW04

Lab Sample ID: 890-4051-4
Matrix: Solid
Date Collected: 02/07/23 13:35
Date Received: 02/07/23 15:05

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			46211	02/13/23 17:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	45928	02/09/23 17:25	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46064	02/12/23 16:38	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	45902	02/09/23 14:14	KS	EET MID
Soluble	Analysis	300.0		1			45920	02/09/23 20:10	CH	EET MID

Client Sample ID: SW05

Lab Sample ID: 890-4051-5
Matrix: Solid
Date Collected: 02/07/23 13:40
Date Received: 02/07/23 15:05

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	46016	02/10/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46059	02/11/23 22:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46244	02/13/23 19:39	SM	EET MID
Total/NA	Analysis	8015 NM		1			46211	02/13/23 17:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	45928	02/09/23 17:25	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46064	02/12/23 17:21	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	45902	02/09/23 14:14	KS	EET MID
Soluble	Analysis	300.0		1			45920	02/09/23 20:16	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: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

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	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

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: ADU 641

Job ID: 890-4051-1
SDG: 03C1558180

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4051-1	SW01	Solid	02/07/23 13:20	02/07/23 15:05	0 - 4
890-4051-2	SW02	Solid	02/07/23 13:25	02/07/23 15:05	0 - 4
890-4051-3	SW03	Solid	02/07/23 13:30	02/07/23 15:05	0 - 4
890-4051-4	SW04	Solid	02/07/23 13:35	02/07/23 15:05	0 - 4
890-4051-5	SW05	Solid	02/07/23 13:40	02/07/23 15:05	0 - 4

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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 1 of 1

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	337-257-8307	Email:	garrett.green@exxonmobil.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:	ADU 641	Turn Around	
Project Number:	03C1558H0	☑ Routine ☐ Rush	
Project Location:	32.533, -104.256	Due Date:	
Sampler's Name:	Kase Parker	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#0002
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

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_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

890-4051 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX	TPH	Chloride	Sample Comments
SW01	S	2/7/23	1320	0-4	C	1		X	X	X	Incident #:
SW02			1325			1					NAPP2302365577
SW03			1330			1					CC:
SW04			1335			1					1136141001
SW05	V	V	1340	V	V	1		V	V	V	
											t.morrissey@ensolum.com

Parameters

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		2.7.23 1505	3		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4051-1
SDG Number: 03C1558180

Login Number: 4051
List Number: 1
Creator: Clifton, Cloe

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: 890-4051-1
SDG Number: 03C1558180

Login Number: 4051
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/09/23 12:36 PM

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: Tacoma Morrissey
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 2/21/2023 3:30:08 PM Revision 1

JOB DESCRIPTION

ADU 641
SDG NUMBER 03C1558180

JOB NUMBER

890-4079-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

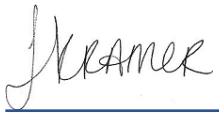
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



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2/21/2023 3:30:08 PM
Revision 1

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

Client: Ensolum
Project/Site: ADU 641

Laboratory Job ID: 890-4079-1
SDG: 03C1558180

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

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, low 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/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

Job ID: 890-4079-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4079-1

REVISION

The report being provided is a revision of the original report sent on 2/16/2023. The report (revision 1) is being revised due to Per client email, requesting TPH re run on FS03, FS05, and FS07.

Report revision history

Receipt
The samples were received on 2/9/2023 2:46 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-4079-1), FS02 (890-4079-2), FS03 (890-4079-3), FS04 (890-4079-4), FS05 (890-4079-5), FS06 (890-4079-6), FS07 (890-4079-7), FS08 (890-4079-8), FS09 (890-4079-9), FS10 (890-4079-10) and FS11 (890-4079-11).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: FS01 (890-4079-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Spike compounds were inadvertently omitted during the extraction process for the matrix spike/matrix spike duplicate (MS/MSD); therefore, matrix spike recoveries are unavailable for preparation batch 880-46402 and analytical batch 880-46403. The associated laboratory control sample (LCS) met acceptance criteria.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-24753-A-1-B 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.

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS03 (890-4079-3) and FS04 (890-4079-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: FS08 (890-4079-8). 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.

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: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

Client Sample ID: FS01
Date Collected: 02/09/23 10:00
Date Received: 02/09/23 14:46
Sample Depth: 4'

Lab Sample ID: 890-4079-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0200	U	0.0200		mg/Kg		02/13/23 15:28	02/15/23 05:56	10
Toluene	**0.0589**		0.0200		mg/Kg		02/13/23 15:28	02/15/23 05:56	10
Ethylbenzene	<0.0200	U	0.0200		mg/Kg		02/13/23 15:28	02/15/23 05:56	10
m-Xylene & p-Xylene	<0.0399	U	0.0399		mg/Kg		02/13/23 15:28	02/15/23 05:56	10
o-Xylene	<0.0200	U	0.0200		mg/Kg		02/13/23 15:28	02/15/23 05:56	10
Xylenes, Total	<0.0399	U	0.0399		mg/Kg		02/13/23 15:28	02/15/23 05:56	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*1216*	*S1+*	*70 - 130*	*02/13/23 15:28*	*02/15/23 05:56*	*10*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*02/13/23 15:28*	*02/15/23 05:56*	*10*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0589**		0.0399		mg/Kg			02/15/23 10:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**85.8**		49.9		mg/Kg			02/16/23 11:51	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	<49.9	U	49.9		mg/Kg		02/14/23 12:14	02/15/23 21:04	1
Diesel Range Organics (Over C10-C28)	**85.8**		49.9		mg/Kg		02/14/23 12:14	02/15/23 21:04	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/14/23 12:14	02/15/23 21:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*75*		*70 - 130*	*02/14/23 12:14*	*02/15/23 21:04*	*1*
o-Terphenyl	*73*		*70 - 130*	*02/14/23 12:14*	*02/15/23 21:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3710**		49.7		mg/Kg			02/14/23 11:45	10

Client Sample ID: FS02
Date Collected: 02/09/23 10:05
Date Received: 02/09/23 14:46
Sample Depth: 4'

Lab Sample ID: 890-4079-2
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		02/13/23 15:28	02/15/23 04:34	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/13/23 15:28	02/15/23 04:34	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/13/23 15:28	02/15/23 04:34	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/13/23 15:28	02/15/23 04:34	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/13/23 15:28	02/15/23 04:34	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/13/23 15:28	02/15/23 04:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*02/13/23 15:28*	*02/15/23 04:34*	*1*

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

Client Sample ID: FS02
Date Collected: 02/09/23 10:05
Date Received: 02/09/23 14:46
Sample Depth: 4'

Lab Sample ID: 890-4079-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*02/13/23 15:28*	*02/15/23 04:34*	*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			02/15/23 10:05	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			02/16/23 11:51	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	<50.0	U	50.0	mg/Kg		02/14/23 12:14	02/15/23 22:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/14/23 12:14	02/15/23 22:09	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/14/23 12:14	02/15/23 22:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*73*		*70 - 130*	*02/14/23 12:14*	*02/15/23 22:09*	*1*
o-Terphenyl	*72*		*70 - 130*	*02/14/23 12:14*	*02/15/23 22:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3670**		50.5	mg/Kg			02/14/23 12:03	10

Client Sample ID: FS03
Date Collected: 02/09/23 10:10
Date Received: 02/09/23 14:46
Sample Depth: 4'

Lab Sample ID: 890-4079-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0199	U	0.0199	mg/Kg		02/13/23 15:28	02/15/23 06:17	10
Toluene	<0.0199	U	0.0199	mg/Kg		02/13/23 15:28	02/15/23 06:17	10
Ethylbenzene	<0.0199	U	0.0199	mg/Kg		02/13/23 15:28	02/15/23 06:17	10
m-Xylene & p-Xylene	<0.0398	U	0.0398	mg/Kg		02/13/23 15:28	02/15/23 06:17	10
o-Xylene	<0.0199	U	0.0199	mg/Kg		02/13/23 15:28	02/15/23 06:17	10
Xylenes, Total	<0.0398	U	0.0398	mg/Kg		02/13/23 15:28	02/15/23 06:17	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*02/13/23 15:28*	*02/15/23 06:17*	*10*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*02/13/23 15:28*	*02/15/23 06:17*	*10*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0398	U	0.0398	mg/Kg			02/15/23 10:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**144**		49.9	mg/Kg			02/16/23 11:51	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

Client Sample ID: FS03

Date Collected: 02/09/23 10:10
Date Received: 02/09/23 14:46
Sample Depth: 4'

Lab Sample ID: 890-4079-3

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	<49.9	U	49.9		mg/Kg		02/14/23 12:14	02/15/23 22:32	1
Diesel Range Organics (Over C10-C28)	**144**		49.9		mg/Kg		02/14/23 12:14	02/15/23 22:32	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/14/23 12:14	02/15/23 22:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*71*		*70 - 130*	*02/14/23 12:14*	*02/15/23 22:32*	*1*
o-Terphenyl	*69*	*S1-*	*70 - 130*	*02/14/23 12:14*	*02/15/23 22:32*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2430**		24.9		mg/Kg			02/14/23 12:09	5

Client Sample ID: FS04

Date Collected: 02/09/23 10:15
Date Received: 02/09/23 14:46
Sample Depth: 4'

Lab Sample ID: 890-4079-4

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0198	U	0.0198		mg/Kg		02/13/23 15:28	02/15/23 06:37	10
Toluene	<0.0198	U	0.0198		mg/Kg		02/13/23 15:28	02/15/23 06:37	10
Ethylbenzene	<0.0198	U	0.0198		mg/Kg		02/13/23 15:28	02/15/23 06:37	10
m-Xylene & p-Xylene	<0.0396	U	0.0396		mg/Kg		02/13/23 15:28	02/15/23 06:37	10
o-Xylene	<0.0198	U	0.0198		mg/Kg		02/13/23 15:28	02/15/23 06:37	10
Xylenes, Total	<0.0396	U	0.0396		mg/Kg		02/13/23 15:28	02/15/23 06:37	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*02/13/23 15:28*	*02/15/23 06:37*	*10*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*02/13/23 15:28*	*02/15/23 06:37*	*10*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0396	U	0.0396		mg/Kg			02/15/23 10:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**62.9**		49.8		mg/Kg			02/16/23 11:51	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	<49.8	U	49.8		mg/Kg		02/14/23 12:14	02/15/23 22:54	1
Diesel Range Organics (Over C10-C28)	**62.9**		49.8		mg/Kg		02/14/23 12:14	02/15/23 22:54	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		02/14/23 12:14	02/15/23 22:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*74*		*70 - 130*	*02/14/23 12:14*	*02/15/23 22:54*	*1*
o-Terphenyl	*68*	*S1-*	*70 - 130*	*02/14/23 12:14*	*02/15/23 22:54*	*1*

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

Client Sample ID: FS04
Date Collected: 02/09/23 10:15
Date Received: 02/09/23 14:46
Sample Depth: 4'

Lab Sample ID: 890-4079-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**384**		5.00		mg/Kg			02/14/23 12:15	1

Client Sample ID: FS05
Date Collected: 02/09/23 10:20
Date Received: 02/09/23 14:46
Sample Depth: 4'

Lab Sample ID: 890-4079-5
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0199	U	0.0199		mg/Kg		02/13/23 15:28	02/15/23 06:57	10
Toluene	<0.0199	U	0.0199		mg/Kg		02/13/23 15:28	02/15/23 06:57	10
Ethylbenzene	<0.0199	U	0.0199		mg/Kg		02/13/23 15:28	02/15/23 06:57	10
m-Xylene & p-Xylene	<0.0398	U	0.0398		mg/Kg		02/13/23 15:28	02/15/23 06:57	10
o-Xylene	<0.0199	U	0.0199		mg/Kg		02/13/23 15:28	02/15/23 06:57	10
Xylenes, Total	<0.0398	U	0.0398		mg/Kg		02/13/23 15:28	02/15/23 06:57	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*02/13/23 15:28*	*02/15/23 06:57*	*10*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*02/13/23 15:28*	*02/15/23 06:57*	*10*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0398	U	0.0398		mg/Kg			02/15/23 10:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**112**		50.0		mg/Kg			02/16/23 11:51	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	<50.0	U	50.0		mg/Kg		02/17/23 09:56	02/18/23 18:54	1
Diesel Range Organics (Over C10-C28)	**112**		50.0		mg/Kg		02/17/23 09:56	02/18/23 18:54	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/17/23 09:56	02/18/23 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*02/17/23 09:56*	*02/18/23 18:54*	*1*
o-Terphenyl	*89*		*70 - 130*	*02/17/23 09:56*	*02/18/23 18:54*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**488**		4.95		mg/Kg			02/14/23 12:22	1

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

Client Sample ID: FS06
Date Collected: 02/09/23 10:25
Date Received: 02/09/23 14:46
Sample Depth: 4'

Lab Sample ID: 890-4079-6
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		02/13/23 15:28	02/15/23 04:55	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/13/23 15:28	02/15/23 04:55	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/13/23 15:28	02/15/23 04:55	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/13/23 15:28	02/15/23 04:55	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/13/23 15:28	02/15/23 04:55	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/13/23 15:28	02/15/23 04:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*02/13/23 15:28*	*02/15/23 04:55*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*02/13/23 15:28*	*02/15/23 04:55*	*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			02/15/23 10:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**78.4**		50.0		mg/Kg			02/16/23 11:51	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	<50.0	U	50.0		mg/Kg		02/14/23 12:14	02/15/23 23:37	1
Diesel Range Organics (Over C10-C28)	**78.4**		50.0		mg/Kg		02/14/23 12:14	02/15/23 23:37	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/14/23 12:14	02/15/23 23:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*02/14/23 12:14*	*02/15/23 23:37*	*1*
o-Terphenyl	*82*		*70 - 130*	*02/14/23 12:14*	*02/15/23 23:37*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**442**		4.96		mg/Kg			02/14/23 12:28	1

Client Sample ID: FS07
Date Collected: 02/09/23 10:30
Date Received: 02/09/23 14:46
Sample Depth: 4'

Lab Sample ID: 890-4079-7
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		02/13/23 15:28	02/15/23 05:15	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/13/23 15:28	02/15/23 05:15	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/13/23 15:28	02/15/23 05:15	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/13/23 15:28	02/15/23 05:15	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/13/23 15:28	02/15/23 05:15	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/13/23 15:28	02/15/23 05:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*02/13/23 15:28*	*02/15/23 05:15*	*1*

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

Client Sample ID: FS07
Date Collected: 02/09/23 10:30
Date Received: 02/09/23 14:46
Sample Depth: 4'

Lab Sample ID: 890-4079-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*02/13/23 15:28*	*02/15/23 05:15*	*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			02/15/23 10:05	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			02/16/23 11:51	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	<50.0	U	50.0	mg/Kg		02/17/23 09:56	02/18/23 19:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/17/23 09:56	02/18/23 19:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/17/23 09:56	02/18/23 19:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*02/17/23 09:56*	*02/18/23 19:16*	*1*
o-Terphenyl	*95*		*70 - 130*	*02/17/23 09:56*	*02/18/23 19:16*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**406**		4.98	mg/Kg			02/14/23 12:34	1

Client Sample ID: FS08
Date Collected: 02/09/23 10:35
Date Received: 02/09/23 14:46
Sample Depth: 4'

Lab Sample ID: 890-4079-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0200	U	0.0200	mg/Kg		02/13/23 15:28	02/15/23 07:18	10
Toluene	<0.0200	U	0.0200	mg/Kg		02/13/23 15:28	02/15/23 07:18	10
Ethylbenzene	<0.0200	U	0.0200	mg/Kg		02/13/23 15:28	02/15/23 07:18	10
m-Xylene & p-Xylene	<0.0401	U	0.0401	mg/Kg		02/13/23 15:28	02/15/23 07:18	10
o-Xylene	<0.0200	U	0.0200	mg/Kg		02/13/23 15:28	02/15/23 07:18	10
Xylenes, Total	<0.0401	U	0.0401	mg/Kg		02/13/23 15:28	02/15/23 07:18	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*02/13/23 15:28*	*02/15/23 07:18*	*10*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*02/13/23 15:28*	*02/15/23 07:18*	*10*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0401	U	0.0401	mg/Kg			02/15/23 10:05	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			02/16/23 11:51	1

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Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

Client Sample ID: FS08
Date Collected: 02/09/23 10:35
Date Received: 02/09/23 14:46
Sample Depth: 4'

Lab Sample ID: 890-4079-8
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		02/14/23 12:14	02/16/23 00:20	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/14/23 12:14	02/16/23 00:20	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/14/23 12:14	02/16/23 00:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*0.3*	*S1-*	*70 - 130*	*02/14/23 12:14*	*02/16/23 00:20*	*1*
o-Terphenyl	*0.08*	*S1-*	*70 - 130*	*02/14/23 12:14*	*02/16/23 00:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4360**		50.0		mg/Kg			02/14/23 12:53	10

Client Sample ID: FS09
Date Collected: 02/09/23 10:40
Date Received: 02/09/23 14:46
Sample Depth: 4'

Lab Sample ID: 890-4079-9
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0200	U	0.0200		mg/Kg		02/15/23 10:46	02/15/23 17:26	10
Toluene	**0.0801**		0.0200		mg/Kg		02/15/23 10:46	02/15/23 17:26	10
Ethylbenzene	<0.0200	U	0.0200		mg/Kg		02/15/23 10:46	02/15/23 17:26	10
m-Xylene & p-Xylene	**0.0537**		0.0401		mg/Kg		02/15/23 10:46	02/15/23 17:26	10
o-Xylene	<0.0200	U	0.0200		mg/Kg		02/15/23 10:46	02/15/23 17:26	10
Xylenes, Total	**0.0537**		0.0401		mg/Kg		02/15/23 10:46	02/15/23 17:26	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*02/15/23 10:46*	*02/15/23 17:26*	*10*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*02/15/23 10:46*	*02/15/23 17:26*	*10*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.134**		0.0401		mg/Kg			02/16/23 09:26	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			02/16/23 11:51	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	<50.0	U	50.0		mg/Kg		02/14/23 12:14	02/16/23 00:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/14/23 12:14	02/16/23 00:42	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/14/23 12:14	02/16/23 00:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*02/14/23 12:14*	*02/16/23 00:42*	*1*
o-Terphenyl	*92*		*70 - 130*	*02/14/23 12:14*	*02/16/23 00:42*	*1*

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

Client Sample ID: FS09

Date Collected: 02/09/23 10:40
Date Received: 02/09/23 14:46
Sample Depth: 4'

Lab Sample ID: 890-4079-9
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1550		24.9		mg/Kg			02/14/23 12:59	5

Client Sample ID: FS10

Date Collected: 02/09/23 13:10
Date Received: 02/09/23 14:46
Sample Depth: 12'

Lab Sample ID: 890-4079-10
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		02/13/23 15:28	02/15/23 05:36	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/13/23 15:28	02/15/23 05:36	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/13/23 15:28	02/15/23 05:36	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/13/23 15:28	02/15/23 05:36	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/13/23 15:28	02/15/23 05:36	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/13/23 15:28	02/15/23 05:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*02/13/23 15:28*	*02/15/23 05:36*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*02/13/23 15:28*	*02/15/23 05:36*	*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			02/15/23 10:05	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			02/16/23 11:51	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	<50.0	U	50.0		mg/Kg		02/14/23 12:14	02/16/23 01:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/14/23 12:14	02/16/23 01:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/14/23 12:14	02/16/23 01:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*02/14/23 12:14*	*02/16/23 01:04*	*1*
o-Terphenyl	*81*		*70 - 130*	*02/14/23 12:14*	*02/16/23 01:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2190		25.2		mg/Kg			02/14/23 13:17	5

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

Client Sample ID: FS11
Date Collected: 02/09/23 13:15
Date Received: 02/09/23 14:46
Sample Depth: 12'

Lab Sample ID: 890-4079-11
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		02/14/23 12:23	02/15/23 02:50	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/14/23 12:23	02/15/23 02:50	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/14/23 12:23	02/15/23 02:50	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/14/23 12:23	02/15/23 02:50	1
o-Xylene	**0.00440**		0.00199		mg/Kg		02/14/23 12:23	02/15/23 02:50	1
Xylenes, Total	**0.00440**		0.00398		mg/Kg		02/14/23 12:23	02/15/23 02:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*02/14/23 12:23*	*02/15/23 02:50*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*02/14/23 12:23*	*02/15/23 02:50*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00440**		0.00398		mg/Kg			02/15/23 09:55	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			02/16/23 11:51	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	<49.9	U	49.9		mg/Kg		02/14/23 12:14	02/16/23 01:47	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/14/23 12:14	02/16/23 01:47	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/14/23 12:14	02/16/23 01:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*02/14/23 12:14*	*02/16/23 01:47*	*1*
o-Terphenyl	*80*		*70 - 130*	*02/14/23 12:14*	*02/16/23 01:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3630**		49.9		mg/Kg			02/14/23 13:23	10

Surrogate Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

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)
880-24313-A-4-C MS	Matrix Spike	103	101
880-24313-A-4-D MSD	Matrix Spike Duplicate	114	90
880-24753-A-1-A MS	Matrix Spike	88	95
880-24753-A-1-B MSD	Matrix Spike Duplicate	214 S1+	238 S1+
890-4062-A-1-E MS	Matrix Spike	117	104
890-4062-A-1-F MSD	Matrix Spike Duplicate	118	106
890-4079-1	FS01	1216 S1+	77
890-4079-2	FS02	123	111
890-4079-3	FS03	107	103
890-4079-4	FS04	100	95
890-4079-5	FS05	95	105
890-4079-6	FS06	130	110
890-4079-7	FS07	130	105
890-4079-8	FS08	122	104
890-4079-9	FS09	110	105
890-4079-10	FS10	128	111
890-4079-11	FS11	108	85
LCS 880-46190/1-A	Lab Control Sample	118	104
LCS 880-46275/1-A	Lab Control Sample	113	102
LCS 880-46402/1-A	Lab Control Sample	89	90
LCSD 880-46190/2-A	Lab Control Sample Dup	118	110
LCSD 880-46275/2-A	Lab Control Sample Dup	115	101
LCSD 880-46402/2-A	Lab Control Sample Dup	81	99
MB 880-46177/5-A	Method Blank	76	88
MB 880-46190/5-A	Method Blank	116	105
MB 880-46191/5-A	Method Blank	113	103
MB 880-46275/5-A	Method Blank	79	90
MB 880-46402/5-A	Method Blank	92	94

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)
880-24875-A-1-A MS	Matrix Spike	103	89
880-24875-A-1-B MSD	Matrix Spike Duplicate	93	84
890-4079-1	FS01	75	73
890-4079-1 MS	FS01	89	81
890-4079-1 MSD	FS01	90	83
890-4079-2	FS02	73	72
890-4079-3	FS03	71	69 S1-
890-4079-4	FS04	74	68 S1-
890-4079-5	FS05	93	89
890-4079-6	FS06	89	82
890-4079-7	FS07	92	95

Surrogate Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-4079-8	FS08	0.3 S1-	0.08 S1-
890-4079-9	FS09	95	92
890-4079-10	FS10	86	81
890-4079-11	FS11	86	80
LCS 880-46316/2-A	Lab Control Sample	91	93
LCS 880-46582/2-A	Lab Control Sample	99	105
LCSD 880-46316/3-A	Lab Control Sample Dup	91	90
LCSD 880-46582/3-A	Lab Control Sample Dup	98	107
MB 880-46316/1-A	Method Blank	94	91
MB 880-46582/1-A	Method Blank	97	105

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-46177/5-A
Matrix: Solid
Analysis Batch: 46260

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 46177

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/13/23 15:05	02/14/23 11:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/13/23 15:05	02/14/23 11:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/13/23 15:05	02/14/23 11:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/13/23 15:05	02/14/23 11:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/13/23 15:05	02/14/23 11:06	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/13/23 15:05	02/14/23 11:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*02/13/23 15:05*	*02/14/23 11:06*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*02/13/23 15:05*	*02/14/23 11:06*	*1*

Lab Sample ID: MB 880-46190/5-A
Matrix: Solid
Analysis Batch: 46261

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 46190

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/13/23 15:28	02/14/23 23:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/13/23 15:28	02/14/23 23:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/13/23 15:28	02/14/23 23:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/13/23 15:28	02/14/23 23:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/13/23 15:28	02/14/23 23:12	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/13/23 15:28	02/14/23 23:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*02/13/23 15:28*	*02/14/23 23:12*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*02/13/23 15:28*	*02/14/23 23:12*	*1*

Lab Sample ID: LCS 880-46190/1-A
Matrix: Solid
Analysis Batch: 46261

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46190

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09522		mg/Kg		95	70 - 130		
Toluene			0.100	0.09284		mg/Kg		93	70 - 130		
Ethylbenzene			0.100	0.09111		mg/Kg		91	70 - 130		
m-Xylene & p-Xylene			0.200	0.1908		mg/Kg		95	70 - 130		
o-Xylene			0.100	0.09561		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-46190/2-A
Matrix: Solid
Analysis Batch: 46261

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 46190

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1115		mg/Kg		112	70 - 130	16	35

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

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

Lab Sample ID: LCSD 880-46190/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46261 — **Prep Batch: 46190**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1074		mg/Kg		107	70 - 130	15	35
Ethylbenzene			0.100	0.1058		mg/Kg		106	70 - 130	15	35
m-Xylene & p-Xylene			0.200	0.2205		mg/Kg		110	70 - 130	14	35
o-Xylene			0.100	0.1076		mg/Kg		108	70 - 130	12	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 890-4062-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46261 — **Prep Batch: 46190**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.101	0.08805		mg/Kg		87	70 - 130
Toluene	<0.00201	U	0.101	0.08185		mg/Kg		81	70 - 130
Ethylbenzene	<0.00201	U	0.101	0.07901		mg/Kg		78	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.202	0.1644		mg/Kg		82	70 - 130
o-Xylene	<0.00201	U	0.101	0.08020		mg/Kg		79	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 890-4062-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46261 — **Prep Batch: 46190**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0990	0.08519		mg/Kg		86	70 - 130	3	35
Toluene	<0.00201	U	0.0990	0.07912		mg/Kg		80	70 - 130	3	35
Ethylbenzene	<0.00201	U	0.0990	0.07707		mg/Kg		78	70 - 130	2	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1602		mg/Kg		81	70 - 130	3	35
o-Xylene	<0.00201	U	0.0990	0.07908		mg/Kg		79	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: MB 880-46191/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46261 — **Prep Batch: 46191**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/13/23 15:34	02/14/23 11:36	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/13/23 15:34	02/14/23 11:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/13/23 15:34	02/14/23 11:36	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/13/23 15:34	02/14/23 11:36	1

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

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

Lab Sample ID: MB 880-46191/5-A
Matrix: Solid
Analysis Batch: 46261

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 46191

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/13/23 15:34	02/14/23 11:36	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/13/23 15:34	02/14/23 11:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*02/13/23 15:34*	*02/14/23 11:36*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*02/13/23 15:34*	*02/14/23 11:36*	*1*

Lab Sample ID: MB 880-46275/5-A
Matrix: Solid
Analysis Batch: 46260

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 46275

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/14/23 09:23	02/14/23 21:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/14/23 09:23	02/14/23 21:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/14/23 09:23	02/14/23 21:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/14/23 09:23	02/14/23 21:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/14/23 09:23	02/14/23 21:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/14/23 09:23	02/14/23 21:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*02/14/23 09:23*	*02/14/23 21:41*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*02/14/23 09:23*	*02/14/23 21:41*	*1*

Lab Sample ID: LCS 880-46275/1-A
Matrix: Solid
Analysis Batch: 46260

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46275

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08909		mg/Kg		89	70 - 130		
Toluene			0.100	0.08799		mg/Kg		88	70 - 130		
Ethylbenzene			0.100	0.09387		mg/Kg		94	70 - 130		
m-Xylene & p-Xylene			0.200	0.2005		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.1086		mg/Kg		109	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-46275/2-A
Matrix: Solid
Analysis Batch: 46260

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 46275

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1073		mg/Kg		107	70 - 130	19	35
Toluene			0.100	0.1037		mg/Kg		104	70 - 130	16	35
Ethylbenzene			0.100	0.1056		mg/Kg		106	70 - 130	12	35
m-Xylene & p-Xylene			0.200	0.2275		mg/Kg		114	70 - 130	13	35
o-Xylene			0.100	0.1175		mg/Kg		117	70 - 130	8	35

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 880-24313-A-4-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46260 — **Prep Batch: 46275**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.100	0.09069		mg/Kg		90	70 - 130
Toluene	<0.00200	U	0.100	0.08947		mg/Kg		89	70 - 130
Ethylbenzene	<0.00200	U	0.100	0.08980		mg/Kg		89	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.201	0.1896		mg/Kg		94	70 - 130
o-Xylene	<0.00200	U	0.100	0.09667		mg/Kg		96	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 880-24313-A-4-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46260 — **Prep Batch: 46275**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0990	0.09474		mg/Kg		96	70 - 130	4	35
Toluene	<0.00200	U	0.0990	0.09519		mg/Kg		96	70 - 130	6	35
Ethylbenzene	<0.00200	U	0.0990	0.1023		mg/Kg		103	70 - 130	13	35
m-Xylene & p-Xylene	<0.00401	U	0.198	0.2156		mg/Kg		109	70 - 130	13	35
o-Xylene	<0.00200	U	0.0990	0.1100		mg/Kg		111	70 - 130	13	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	114		70 - 130
1,4-Difluorobenzene (Surr)	90		70 - 130

Lab Sample ID: MB 880-46402/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46403 — **Prep Batch: 46402**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/15/23 10:46	02/15/23 14:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/15/23 10:46	02/15/23 14:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/15/23 10:46	02/15/23 14:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/15/23 10:46	02/15/23 14:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/15/23 10:46	02/15/23 14:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/15/23 10:46	02/15/23 14:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	02/15/23 10:46	02/15/23 14:39	1
1,4-Difluorobenzene (Surr)	94		70 - 130	02/15/23 10:46	02/15/23 14:39	1

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

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

Lab Sample ID: LCS 880-46402/1-A
Matrix: Solid
Analysis Batch: 46403

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46402

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1028		mg/Kg		103	70 - 130		
Toluene			0.100	0.1043		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.09552		mg/Kg		96	70 - 130		
m-Xylene & p-Xylene			0.200	0.1882		mg/Kg		94	70 - 130		
o-Xylene			0.100	0.09407		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: LCSD 880-46402/2-A
Matrix: Solid
Analysis Batch: 46403

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 46402

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1056		mg/Kg		106	70 - 130	3	35
Toluene			0.100	0.09964		mg/Kg		100	70 - 130	5	35
Ethylbenzene			0.100	0.08470		mg/Kg		85	70 - 130	12	35
m-Xylene & p-Xylene			0.200	0.1622		mg/Kg		81	70 - 130	15	35
o-Xylene			0.100	0.08187		mg/Kg		82	70 - 130	14	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-24753-A-1-A MS
Matrix: Solid
Analysis Batch: 46403

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 46402

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U F1 F2	0.0998	0.1037		mg/Kg		103	70 - 130		
Toluene	<0.00198	U F1 F2	0.0998	0.1004		mg/Kg		101	70 - 130		
Ethylbenzene	<0.00198	U F1 F2	0.0998	0.08927		mg/Kg		89	70 - 130		
m-Xylene & p-Xylene	<0.00396	U F1 F2	0.200	0.1742		mg/Kg		87	70 - 130		
o-Xylene	<0.00198	U F1 F2	0.0998	0.08656		mg/Kg		87	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 880-24753-A-1-B MSD
Matrix: Solid
Analysis Batch: 46403

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 46402

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U F1 F2	0.100	0.2406	F1 F2	mg/Kg		239	70 - 130	79	35
Toluene	<0.00198	U F1 F2	0.100	0.2334	F1 F2	mg/Kg		232	70 - 130	80	35
Ethylbenzene	<0.00198	U F1 F2	0.100	0.2034	F1 F2	mg/Kg		203	70 - 130	78	35

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

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

Lab Sample ID: 880-24753-A-1-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46403 — **Prep Batch: 46402**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
m-Xylene & p-Xylene	<0.00396	U F1 F2	0.201	0.3959	F1 F2	mg/Kg		197	70 - 130	78	35
o-Xylene	<0.00198	U F1 F2	0.100	0.1996	F1 F2	mg/Kg		199	70 - 130	79	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*214*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*238*	*S1+*	*70 - 130*

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

Lab Sample ID: MB 880-46316/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46351 — **Prep Batch: 46316**

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		02/14/23 12:14	02/15/23 19:57	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/14/23 12:14	02/15/23 19:57	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/14/23 12:14	02/15/23 19:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*02/14/23 12:14*	*02/15/23 19:57*	*1*
o-Terphenyl	*91*		*70 - 130*	*02/14/23 12:14*	*02/15/23 19:57*	*1*

Lab Sample ID: LCS 880-46316/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46351 — **Prep Batch: 46316**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	867.8		mg/Kg		87	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	940.4		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*91*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

Lab Sample ID: LCSD 880-46316/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46351 — **Prep Batch: 46316**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	875.4		mg/Kg		88	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	914.6		mg/Kg		91	70 - 130	3	20

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

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

Lab Sample ID: LCSD 880-46316/3-A
Matrix: Solid
Analysis Batch: 46351

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 46316

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	90		70 - 130

Lab Sample ID: 890-4079-1 MS
Matrix: Solid
Analysis Batch: 46351

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 46316

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	986.8		mg/Kg		96	70 - 130		
Diesel Range Organics (Over C10-C28)	85.8		1000	844.4		mg/Kg		76	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	81		70 - 130

Lab Sample ID: 890-4079-1 MSD
Matrix: Solid
Analysis Batch: 46351

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 46316

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	<49.9	U	1000	911.2		mg/Kg		89	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	85.8		1000	868.9		mg/Kg		78	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	83		70 - 130

Lab Sample ID: MB 880-46582/1-A
Matrix: Solid
Analysis Batch: 46615

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 46582

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		02/17/23 09:56	02/18/23 08:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/17/23 09:56	02/18/23 08:39	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/17/23 09:56	02/18/23 08:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	02/17/23 09:56	02/18/23 08:39	1
o-Terphenyl	105		70 - 130	02/17/23 09:56	02/18/23 08:39	1

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

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

Lab Sample ID: LCS 880-46582/2-A
Matrix: Solid
Analysis Batch: 46615

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46582

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	824.1		mg/Kg		82	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	968.2		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*105*		*70 - 130*

Lab Sample ID: LCSD 880-46582/3-A
Matrix: Solid
Analysis Batch: 46615

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 46582

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	799.6		mg/Kg		80	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	1012		mg/Kg		101	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*98*		*70 - 130*
o-Terphenyl	*107*		*70 - 130*

Lab Sample ID: 880-24875-A-1-A MS
Matrix: Solid
Analysis Batch: 46615

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 46582

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	934.5		mg/Kg		93	70 - 130		
Diesel Range Organics (Over C10-C28)	61.4		1000	952.5		mg/Kg		89	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*103*		*70 - 130*
o-Terphenyl	*89*		*70 - 130*

Lab Sample ID: 880-24875-A-1-B MSD
Matrix: Solid
Analysis Batch: 46615

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 46582

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	<49.9	U	1000	892.6		mg/Kg		89	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	61.4		1000	905.1		mg/Kg		84	70 - 130	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

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

Lab Sample ID: 880-24875-A-1-B MSD
Matrix: Solid
Analysis Batch: 46615

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 46582

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	84		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-46173/1-A
Matrix: Solid
Analysis Batch: 46197

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/14/23 10:49	1

Lab Sample ID: LCS 880-46173/2-A
Matrix: Solid
Analysis Batch: 46197

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	240.4		mg/Kg		96	90 - 110		

Lab Sample ID: LCSD 880-46173/3-A
Matrix: Solid
Analysis Batch: 46197

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	232.8		mg/Kg		93	90 - 110	3	20

Lab Sample ID: 890-4079-7 MS
Matrix: Solid
Analysis Batch: 46197

Client Sample ID: FS07
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	406		249	673.4		mg/Kg		107	90 - 110		

Lab Sample ID: 890-4079-7 MSD
Matrix: Solid
Analysis Batch: 46197

Client Sample ID: FS07
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	406		249	675.7		mg/Kg		108	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

GC VOA

Prep Batch: 46177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-46177/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 46190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4079-1	FS01	Total/NA	Solid	5035	
890-4079-2	FS02	Total/NA	Solid	5035	
890-4079-3	FS03	Total/NA	Solid	5035	
890-4079-4	FS04	Total/NA	Solid	5035	
890-4079-5	FS05	Total/NA	Solid	5035	
890-4079-6	FS06	Total/NA	Solid	5035	
890-4079-7	FS07	Total/NA	Solid	5035	
890-4079-8	FS08	Total/NA	Solid	5035	
890-4079-10	FS10	Total/NA	Solid	5035	
MB 880-46190/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-46190/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-46190/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4062-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-4062-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 46191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-46191/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 46260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4079-11	FS11	Total/NA	Solid	8021B	46275
MB 880-46177/5-A	Method Blank	Total/NA	Solid	8021B	46177
MB 880-46275/5-A	Method Blank	Total/NA	Solid	8021B	46275
LCS 880-46275/1-A	Lab Control Sample	Total/NA	Solid	8021B	46275
LCSD 880-46275/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	46275
880-24313-A-4-C MS	Matrix Spike	Total/NA	Solid	8021B	46275
880-24313-A-4-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	46275

Analysis Batch: 46261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4079-1	FS01	Total/NA	Solid	8021B	46190
890-4079-2	FS02	Total/NA	Solid	8021B	46190
890-4079-3	FS03	Total/NA	Solid	8021B	46190
890-4079-4	FS04	Total/NA	Solid	8021B	46190
890-4079-5	FS05	Total/NA	Solid	8021B	46190
890-4079-6	FS06	Total/NA	Solid	8021B	46190
890-4079-7	FS07	Total/NA	Solid	8021B	46190
890-4079-8	FS08	Total/NA	Solid	8021B	46190
890-4079-10	FS10	Total/NA	Solid	8021B	46190
MB 880-46190/5-A	Method Blank	Total/NA	Solid	8021B	46190
MB 880-46191/5-A	Method Blank	Total/NA	Solid	8021B	46191
LCS 880-46190/1-A	Lab Control Sample	Total/NA	Solid	8021B	46190
LCSD 880-46190/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	46190
890-4062-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	46190
890-4062-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	46190

QC Association Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

GC VOA

Prep Batch: 46275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4079-11	FS11	Total/NA	Solid	5035	
MB 880-46275/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-46275/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-46275/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-24313-A-4-C MS	Matrix Spike	Total/NA	Solid	5035	
880-24313-A-4-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 46386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4079-1	FS01	Total/NA	Solid	Total BTEX	
890-4079-2	FS02	Total/NA	Solid	Total BTEX	
890-4079-3	FS03	Total/NA	Solid	Total BTEX	
890-4079-4	FS04	Total/NA	Solid	Total BTEX	
890-4079-5	FS05	Total/NA	Solid	Total BTEX	
890-4079-6	FS06	Total/NA	Solid	Total BTEX	
890-4079-7	FS07	Total/NA	Solid	Total BTEX	
890-4079-8	FS08	Total/NA	Solid	Total BTEX	
890-4079-9	FS09	Total/NA	Solid	Total BTEX	
890-4079-10	FS10	Total/NA	Solid	Total BTEX	
890-4079-11	FS11	Total/NA	Solid	Total BTEX	

Prep Batch: 46402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4079-9	FS09	Total/NA	Solid	5035	
MB 880-46402/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-46402/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-46402/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-24753-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-24753-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 46403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4079-9	FS09	Total/NA	Solid	8021B	46402
MB 880-46402/5-A	Method Blank	Total/NA	Solid	8021B	46402
LCS 880-46402/1-A	Lab Control Sample	Total/NA	Solid	8021B	46402
LCSD 880-46402/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	46402
880-24753-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	46402
880-24753-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	46402

GC Semi VOA

Prep Batch: 46316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4079-1	FS01	Total/NA	Solid	8015NM Prep	
890-4079-2	FS02	Total/NA	Solid	8015NM Prep	
890-4079-3	FS03	Total/NA	Solid	8015NM Prep	
890-4079-4	FS04	Total/NA	Solid	8015NM Prep	
890-4079-6	FS06	Total/NA	Solid	8015NM Prep	
890-4079-8	FS08	Total/NA	Solid	8015NM Prep	
890-4079-9	FS09	Total/NA	Solid	8015NM Prep	
890-4079-10	FS10	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

GC Semi VOA (Continued)

Prep Batch: 46316 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4079-11	FS11	Total/NA	Solid	8015NM Prep	
MB 880-46316/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-46316/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-46316/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4079-1 MS	FS01	Total/NA	Solid	8015NM Prep	
890-4079-1 MSD	FS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 46351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4079-1	FS01	Total/NA	Solid	8015B NM	46316
890-4079-2	FS02	Total/NA	Solid	8015B NM	46316
890-4079-3	FS03	Total/NA	Solid	8015B NM	46316
890-4079-4	FS04	Total/NA	Solid	8015B NM	46316
890-4079-6	FS06	Total/NA	Solid	8015B NM	46316
890-4079-8	FS08	Total/NA	Solid	8015B NM	46316
890-4079-9	FS09	Total/NA	Solid	8015B NM	46316
890-4079-10	FS10	Total/NA	Solid	8015B NM	46316
890-4079-11	FS11	Total/NA	Solid	8015B NM	46316
MB 880-46316/1-A	Method Blank	Total/NA	Solid	8015B NM	46316
LCS 880-46316/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	46316
LCSD 880-46316/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	46316
890-4079-1 MS	FS01	Total/NA	Solid	8015B NM	46316
890-4079-1 MSD	FS01	Total/NA	Solid	8015B NM	46316

Analysis Batch: 46522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4079-1	FS01	Total/NA	Solid	8015 NM	
890-4079-2	FS02	Total/NA	Solid	8015 NM	
890-4079-3	FS03	Total/NA	Solid	8015 NM	
890-4079-4	FS04	Total/NA	Solid	8015 NM	
890-4079-5	FS05	Total/NA	Solid	8015 NM	
890-4079-6	FS06	Total/NA	Solid	8015 NM	
890-4079-7	FS07	Total/NA	Solid	8015 NM	
890-4079-8	FS08	Total/NA	Solid	8015 NM	
890-4079-9	FS09	Total/NA	Solid	8015 NM	
890-4079-10	FS10	Total/NA	Solid	8015 NM	
890-4079-11	FS11	Total/NA	Solid	8015 NM	

Prep Batch: 46582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4079-5	FS05	Total/NA	Solid	8015NM Prep	
890-4079-7	FS07	Total/NA	Solid	8015NM Prep	
MB 880-46582/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-46582/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-46582/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-24875-A-1-A MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-24875-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 46615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4079-5	FS05	Total/NA	Solid	8015B NM	46582

QC Association Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

GC Semi VOA (Continued)

Analysis Batch: 46615 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4079-7	FS07	Total/NA	Solid	8015B NM	46582
MB 880-46582/1-A	Method Blank	Total/NA	Solid	8015B NM	46582
LCS 880-46582/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	46582
LCSD 880-46582/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	46582
880-24875-A-1-A MS	Matrix Spike	Total/NA	Solid	8015B NM	46582
880-24875-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	46582

HPLC/IC

Leach Batch: 46173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4079-1	FS01	Soluble	Solid	DI Leach	
890-4079-2	FS02	Soluble	Solid	DI Leach	
890-4079-3	FS03	Soluble	Solid	DI Leach	
890-4079-4	FS04	Soluble	Solid	DI Leach	
890-4079-5	FS05	Soluble	Solid	DI Leach	
890-4079-6	FS06	Soluble	Solid	DI Leach	
890-4079-7	FS07	Soluble	Solid	DI Leach	
890-4079-8	FS08	Soluble	Solid	DI Leach	
890-4079-9	FS09	Soluble	Solid	DI Leach	
890-4079-10	FS10	Soluble	Solid	DI Leach	
890-4079-11	FS11	Soluble	Solid	DI Leach	
MB 880-46173/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-46173/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-46173/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4079-7 MS	FS07	Soluble	Solid	DI Leach	
890-4079-7 MSD	FS07	Soluble	Solid	DI Leach	

Analysis Batch: 46197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4079-1	FS01	Soluble	Solid	300.0	46173
890-4079-2	FS02	Soluble	Solid	300.0	46173
890-4079-3	FS03	Soluble	Solid	300.0	46173
890-4079-4	FS04	Soluble	Solid	300.0	46173
890-4079-5	FS05	Soluble	Solid	300.0	46173
890-4079-6	FS06	Soluble	Solid	300.0	46173
890-4079-7	FS07	Soluble	Solid	300.0	46173
890-4079-8	FS08	Soluble	Solid	300.0	46173
890-4079-9	FS09	Soluble	Solid	300.0	46173
890-4079-10	FS10	Soluble	Solid	300.0	46173
890-4079-11	FS11	Soluble	Solid	300.0	46173
MB 880-46173/1-A	Method Blank	Soluble	Solid	300.0	46173
LCS 880-46173/2-A	Lab Control Sample	Soluble	Solid	300.0	46173
LCSD 880-46173/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	46173
890-4079-7 MS	FS07	Soluble	Solid	300.0	46173
890-4079-7 MSD	FS07	Soluble	Solid	300.0	46173

Lab Chronicle

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

Client Sample ID: FS01
Date Collected: 02/09/23 10:00
Date Received: 02/09/23 14:46

Lab Sample ID: 890-4079-1
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	46190	02/13/23 15:28	MNR	EET MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	46261	02/15/23 05:56	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46386	02/15/23 10:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			46522	02/16/23 11:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	46316	02/14/23 12:14	SM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46351	02/15/23 21:04	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	46173	02/13/23 16:20	KS	EET MID
Soluble	Analysis	300.0		10			46197	02/14/23 11:45	CH	EET MID

Client Sample ID: FS02
Date Collected: 02/09/23 10:05
Date Received: 02/09/23 14:46

Lab Sample ID: 890-4079-2
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			4.98 g	5 mL	46190	02/13/23 15:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46261	02/15/23 04:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46386	02/15/23 10:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			46522	02/16/23 11:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	46316	02/14/23 12:14	SM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46351	02/15/23 22:09	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	46173	02/13/23 16:20	KS	EET MID
Soluble	Analysis	300.0		10			46197	02/14/23 12:03	CH	EET MID

Client Sample ID: FS03
Date Collected: 02/09/23 10:10
Date Received: 02/09/23 14:46

Lab Sample ID: 890-4079-3
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			5.02 g	5 mL	46190	02/13/23 15:28	MNR	EET MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	46261	02/15/23 06:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46386	02/15/23 10:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			46522	02/16/23 11:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	46316	02/14/23 12:14	SM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46351	02/15/23 22:32	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	46173	02/13/23 16:20	KS	EET MID
Soluble	Analysis	300.0		5			46197	02/14/23 12:09	CH	EET MID

Client Sample ID: FS04
Date Collected: 02/09/23 10:15
Date Received: 02/09/23 14:46

Lab Sample ID: 890-4079-4
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			5.05 g	5 mL	46190	02/13/23 15:28	MNR	EET MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	46261	02/15/23 06:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46386	02/15/23 10:05	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

Client Sample ID: FS04
Date Collected: 02/09/23 10:15
Date Received: 02/09/23 14:46

Lab Sample ID: 890-4079-4
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			46522	02/16/23 11:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	46316	02/14/23 12:14	SM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46351	02/15/23 22:54	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	46173	02/13/23 16:20	KS	EET MID
Soluble	Analysis	300.0		1			46197	02/14/23 12:15	CH	EET MID

Client Sample ID: FS05
Date Collected: 02/09/23 10:20
Date Received: 02/09/23 14:46

Lab Sample ID: 890-4079-5
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			5.03 g	5 mL	46190	02/13/23 15:28	MNR	EET MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	46261	02/15/23 06:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46386	02/15/23 10:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			46522	02/16/23 11:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	46582	02/17/23 09:56	SM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46615	02/18/23 18:54	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	46173	02/13/23 16:20	KS	EET MID
Soluble	Analysis	300.0		1			46197	02/14/23 12:22	CH	EET MID

Client Sample ID: FS06
Date Collected: 02/09/23 10:25
Date Received: 02/09/23 14:46

Lab Sample ID: 890-4079-6
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			5.02 g	5 mL	46190	02/13/23 15:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46261	02/15/23 04:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46386	02/15/23 10:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			46522	02/16/23 11:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	46316	02/14/23 12:14	SM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46351	02/15/23 23:37	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	46173	02/13/23 16:20	KS	EET MID
Soluble	Analysis	300.0		1			46197	02/14/23 12:28	CH	EET MID

Client Sample ID: FS07
Date Collected: 02/09/23 10:30
Date Received: 02/09/23 14:46

Lab Sample ID: 890-4079-7
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			4.97 g	5 mL	46190	02/13/23 15:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46261	02/15/23 05:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46386	02/15/23 10:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			46522	02/16/23 11:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	46582	02/17/23 09:56	SM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46615	02/18/23 19:16	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

Client Sample ID: FS07
Date Collected: 02/09/23 10:30
Date Received: 02/09/23 14:46

Lab Sample ID: 890-4079-7
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			5.02 g	50 mL	46173	02/13/23 16:20	KS	EET MID
Soluble	Analysis	300.0		1			46197	02/14/23 12:34	CH	EET MID

Client Sample ID: FS08
Date Collected: 02/09/23 10:35
Date Received: 02/09/23 14:46

Lab Sample ID: 890-4079-8
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			4.99 g	5 mL	46190	02/13/23 15:28	MNR	EET MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	46261	02/15/23 07:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46386	02/15/23 10:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			46522	02/16/23 11:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	46316	02/14/23 12:14	SM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46351	02/16/23 00:20	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	46173	02/13/23 16:20	KS	EET MID
Soluble	Analysis	300.0		10			46197	02/14/23 12:53	CH	EET MID

Client Sample ID: FS09
Date Collected: 02/09/23 10:40
Date Received: 02/09/23 14:46

Lab Sample ID: 890-4079-9
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	46402	02/15/23 10:46	MNR	EET MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	46403	02/15/23 17:26	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			46386	02/16/23 09:26	AJ	EET MID
Total/NA	Analysis	8015 NM		1			46522	02/16/23 11:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	46316	02/14/23 12:14	SM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46351	02/16/23 00:42	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	46173	02/13/23 16:20	KS	EET MID
Soluble	Analysis	300.0		5			46197	02/14/23 12:59	CH	EET MID

Client Sample ID: FS10
Date Collected: 02/09/23 13:10
Date Received: 02/09/23 14:46

Lab Sample ID: 890-4079-10
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	46190	02/13/23 15:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46261	02/15/23 05:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46386	02/15/23 10:05	AJ	EET MID
Total/NA	Analysis	8015 NM		1			46522	02/16/23 11:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	46316	02/14/23 12:14	SM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46351	02/16/23 01:04	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	46173	02/13/23 16:20	KS	EET MID
Soluble	Analysis	300.0		5			46197	02/14/23 13:17	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

Client Sample ID: FS11

Date Collected: 02/09/23 13:15
Date Received: 02/09/23 14:46

Lab Sample ID: 890-4079-11

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	46275	02/14/23 12:23	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46260	02/15/23 02:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			46386	02/15/23 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			46522	02/16/23 11:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	46316	02/14/23 12:14	SM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46351	02/16/23 01:47	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	46173	02/13/23 16:20	KS	EET MID
Soluble	Analysis	300.0		10			46197	02/14/23 13:23	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: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

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	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

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: ADU 641

Job ID: 890-4079-1
SDG: 03C1558180

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4079-1	FS01	Solid	02/09/23 10:00	02/09/23 14:46	4'
890-4079-2	FS02	Solid	02/09/23 10:05	02/09/23 14:46	4'
890-4079-3	FS03	Solid	02/09/23 10:10	02/09/23 14:46	4'
890-4079-4	FS04	Solid	02/09/23 10:15	02/09/23 14:46	4'
890-4079-5	FS05	Solid	02/09/23 10:20	02/09/23 14:46	4'
890-4079-6	FS06	Solid	02/09/23 10:25	02/09/23 14:46	4'
890-4079-7	FS07	Solid	02/09/23 10:30	02/09/23 14:46	4'
890-4079-8	FS08	Solid	02/09/23 10:35	02/09/23 14:46	4'
890-4079-9	FS09	Solid	02/09/23 10:40	02/09/23 14:46	4'
890-4079-10	FS10	Solid	02/09/23 13:10	02/09/23 14:46	12'
890-4079-11	FS11	Solid	02/09/23 13:15	02/09/23 14:46	12'

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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: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337.257.8307 Email:		

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:	ADU 641	Turn Around	
Project Number:	~~03615588~~ 03615588	☐ Routine ☐ Rush	
Project Location:	32.53588, -104.20765	Due Date:	
Sampler's Name:	Mercedith Roberts	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:	T-NM-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.6
Total Containers:		Corrected Temperature:	2.4

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX	Chlorides	TPH
FS01	S	2/9/23	1000	4'	C	1		X	X	X
FS02			1005							
FS03			1010							
FS04			1015							
FS05			1020							
FS06			1025							
FS07			1030							
FS08			1035							
FS09			1040	↓	↓	↓		↓	↓	↓
FS10	↓	↓	1310	12'	↓	↓		↓	↓	↓

890-4079 Chain of Custody

Preservative Codes
None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_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
Incident #:
NAPP2302355577
Cost Center:
1136141001
mroberts@ensolum.com

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

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of $85.00 will be applied to each project and a charge of $5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			2-9-23 1446	4		
3						
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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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 2 of 2

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	~~3104~~ XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E. Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337-257-8307	Email:	tmorrissey@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:	ADU 641	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558180	Due Date:	
Project Location:	32.53388 -104.20765		
Sampler's Name:	Meredith Roberts	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:	
Cooler Custody Seals:	Yes No N/A		Correction Factor:	
Sample Custody Seals:	Yes No N/A		Temperature Reading:	
Total Containers:			Corrected Temperature:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	BTEX	Chlorides	TPH	Sample Comments
ES11	S	2/9/23	1315	12'	C	1	X	X	X	Incident #: NAPP2302355577
										Cost Center: 1136141001

Preservative Codes

None: NO — DI Water: H_2O
Cool: Cool — MeOH: Me
HCL: HC — HNO_3: HN
H_2SO_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

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

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of $85.00 will be applied to each project and a charge of $5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 [signature]	Amanda Scott	2-9-23 1446	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4079-1
SDG Number: 03C1558180

Login Number: 4079
List Number: 1
Creator: Stutzman, Amanda

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: 890-4079-1
SDG Number: 03C1558180

Login Number: 4079
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/13/23 08:35 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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 2/23/2023 11:53:17 AM

JOB DESCRIPTION

ADU 641
SDG NUMBER 03C1558180

JOB NUMBER

890-4155-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

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

Authorization

Generated
2/23/2023 11:53:17 AM

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

Client: Ensolum
Project/Site: ADU 641

Laboratory Job ID: 890-4155-1
SDG: 03C1558180

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4155-1
SDG: 03C1558180

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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/Site: ADU 641

Job ID: 890-4155-1
SDG: 03C1558180

Job ID: 890-4155-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4155-1

Receipt
The samples were received on 2/20/2023 2:31 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS12 (890-4155-1), FS13 (890-4155-2) and FS14 (890-4155-3).

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

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-46940 and analytical batch 880-46950 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was 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: ADU 641

Job ID: 890-4155-1
SDG: 03C1558180

Client Sample ID: FS12

Lab Sample ID: 890-4155-1
Matrix: Solid
Date Collected: 02/20/23 12:25
Date Received: 02/20/23 14:31
Sample Depth: 16'

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		02/22/23 09:33	02/23/23 07:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/22/23 09:33	02/23/23 07:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/22/23 09:33	02/23/23 07:44	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		02/22/23 09:33	02/23/23 07:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/22/23 09:33	02/23/23 07:44	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/22/23 09:33	02/23/23 07:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*02/22/23 09:33*	*02/23/23 07:44*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*02/22/23 09:33*	*02/23/23 07:44*	*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			02/23/23 12:22	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			02/23/23 11:59	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		02/22/23 16:36	02/23/23 02:45	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/22/23 16:36	02/23/23 02:45	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/22/23 16:36	02/23/23 02:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*02/22/23 16:36*	*02/23/23 02:45*	*1*
o-Terphenyl	*95*		*70 - 130*	*02/22/23 16:36*	*02/23/23 02:45*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2090**	**F1**	25.1		mg/Kg			02/22/23 14:23	5

Client Sample ID: FS13

Lab Sample ID: 890-4155-2
Matrix: Solid
Date Collected: 02/20/23 10:50
Date Received: 02/20/23 14:31
Sample Depth: 24'

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		02/22/23 09:33	02/23/23 08:04	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/22/23 09:33	02/23/23 08:04	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/22/23 09:33	02/23/23 08:04	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/22/23 09:33	02/23/23 08:04	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/22/23 09:33	02/23/23 08:04	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/22/23 09:33	02/23/23 08:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*02/22/23 09:33*	*02/23/23 08:04*	*1*

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4155-1
SDG: 03C1558180

Client Sample ID: FS13

Lab Sample ID: 890-4155-2
Matrix: Solid
Date Collected: 02/20/23 10:50
Date Received: 02/20/23 14:31
Sample Depth: 24'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*02/22/23 09:33*	*02/23/23 08:04*	*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			02/23/23 12:22	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			02/23/23 11:59	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		02/22/23 16:36	02/23/23 03:06	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/22/23 16:36	02/23/23 03:06	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/22/23 16:36	02/23/23 03:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*02/22/23 16:36*	*02/23/23 03:06*	*1*
o-Terphenyl	*88*		*70 - 130*	*02/22/23 16:36*	*02/23/23 03:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3530**		50.2	mg/Kg			02/22/23 14:41	10

Client Sample ID: FS14

Lab Sample ID: 890-4155-3
Matrix: Solid
Date Collected: 02/20/23 12:30
Date Received: 02/20/23 14:31
Sample Depth: 24'

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		02/22/23 09:33	02/23/23 08:25	1
Toluene	<0.00198	U	0.00198	mg/Kg		02/22/23 09:33	02/23/23 08:25	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		02/22/23 09:33	02/23/23 08:25	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		02/22/23 09:33	02/23/23 08:25	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		02/22/23 09:33	02/23/23 08:25	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		02/22/23 09:33	02/23/23 08:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*02/22/23 09:33*	*02/23/23 08:25*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*02/22/23 09:33*	*02/23/23 08:25*	*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			02/23/23 12:22	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			02/23/23 11:59	1

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4155-1
SDG: 03C1558180

Client Sample ID: FS14

Date Collected: 02/20/23 12:30
Date Received: 02/20/23 14:31
Sample Depth: 24'

Lab Sample ID: 890-4155-3

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	<49.9	U	49.9		mg/Kg		02/22/23 16:36	02/23/23 03:28	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/22/23 16:36	02/23/23 03:28	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/22/23 16:36	02/23/23 03:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*02/22/23 16:36*	*02/23/23 03:28*	*1*
o-Terphenyl	*98*		*70 - 130*	*02/22/23 16:36*	*02/23/23 03:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3820**		49.9		mg/Kg			02/22/23 14:46	10

Surrogate Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4155-1
SDG: 03C1558180

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)
880-24905-A-79-D MS	Matrix Spike	111	112
880-24905-A-79-E MSD	Matrix Spike Duplicate	119	113
890-4155-1	FS12	116	112
890-4155-2	FS13	113	111
890-4155-3	FS14	115	108
LCS 880-46933/1-A	Lab Control Sample	110	113
LCSD 880-46933/2-A	Lab Control Sample Dup	109	113
MB 880-46926/8	Method Blank	105	105
MB 880-46933/5-A	Method Blank	105	104

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)
890-4153-A-1-G MS	Matrix Spike	117	104
890-4153-A-1-H MSD	Matrix Spike Duplicate	98	89
890-4155-1	FS12	93	95
890-4155-2	FS13	85	88
890-4155-3	FS14	95	98
LCS 880-46977/2-A	Lab Control Sample	98	88
LCSD 880-46977/3-A	Lab Control Sample Dup	100	91
MB 880-46977/1-A	Method Blank	126	127

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4155-1
SDG: 03C1558180

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-46926/8
Matrix: Solid
Analysis Batch: 46926

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg			02/22/23 13:39	1
Toluene	<0.00200	U	0.00200		mg/Kg			02/22/23 13:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg			02/22/23 13:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg			02/22/23 13:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg			02/22/23 13:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg			02/22/23 13:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*02/22/23 13:39*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*		*02/22/23 13:39*	*1*

Lab Sample ID: MB 880-46933/5-A
Matrix: Solid
Analysis Batch: 46926

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 46933

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/22/23 09:33	02/23/23 01:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/22/23 09:33	02/23/23 01:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/22/23 09:33	02/23/23 01:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/22/23 09:33	02/23/23 01:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/22/23 09:33	02/23/23 01:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/22/23 09:33	02/23/23 01:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*02/22/23 09:33*	*02/23/23 01:41*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*02/22/23 09:33*	*02/23/23 01:41*	*1*

Lab Sample ID: LCS 880-46933/1-A
Matrix: Solid
Analysis Batch: 46926

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46933

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1029		mg/Kg		103	70 - 130		
Toluene			0.100	0.09799		mg/Kg		98	70 - 130		
Ethylbenzene			0.100	0.1052		mg/Kg		105	70 - 130		
m-Xylene & p-Xylene			0.200	0.2284		mg/Kg		114	70 - 130		
o-Xylene			0.100	0.1113		mg/Kg		111	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: LCSD 880-46933/2-A
Matrix: Solid
Analysis Batch: 46926

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 46933

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1044		mg/Kg		104	70 - 130	1	35

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4155-1
SDG: 03C1558180

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

Lab Sample ID: LCSD 880-46933/2-A
Matrix: Solid
Analysis Batch: 46926

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 46933

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1007		mg/Kg		101	70 - 130	3	35
Ethylbenzene			0.100	0.1051		mg/Kg		105	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.2261		mg/Kg		113	70 - 130	1	35
o-Xylene			0.100	0.1105		mg/Kg		110	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: 880-24905-A-79-D MS
Matrix: Solid
Analysis Batch: 46926

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 46933

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.101	0.1098		mg/Kg		109	70 - 130
Toluene	<0.00200	U	0.101	0.1066		mg/Kg		106	70 - 130
Ethylbenzene	<0.00200	U	0.101	0.1125		mg/Kg		111	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.202	0.2429		mg/Kg		120	70 - 130
o-Xylene	<0.00200	U	0.101	0.1187		mg/Kg		117	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 880-24905-A-79-E MSD
Matrix: Solid
Analysis Batch: 46926

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 46933

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0994	0.1097		mg/Kg		110	70 - 130	0	35
Toluene	<0.00200	U	0.0994	0.1076		mg/Kg		108	70 - 130	1	35
Ethylbenzene	<0.00200	U	0.0994	0.1143		mg/Kg		115	70 - 130	2	35
m-Xylene & p-Xylene	<0.00401	U	0.199	0.2473		mg/Kg		124	70 - 130	2	35
o-Xylene	<0.00200	U	0.0994	0.1213		mg/Kg		122	70 - 130	2	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

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

Lab Sample ID: MB 880-46977/1-A
Matrix: Solid
Analysis Batch: 46917

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 46977

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		02/22/23 16:36	02/22/23 21:03	1

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4155-1
SDG: 03C1558180

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

Lab Sample ID: MB 880-46977/1-A
Matrix: Solid
Analysis Batch: 46917

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 46977

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/22/23 16:36	02/22/23 21:03	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/22/23 16:36	02/22/23 21:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*126*		*70 - 130*	*02/22/23 16:36*	*02/22/23 21:03*	*1*
o-Terphenyl	*127*		*70 - 130*	*02/22/23 16:36*	*02/22/23 21:03*	*1*

Lab Sample ID: LCS 880-46977/2-A
Matrix: Solid
Analysis Batch: 46917

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46977

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	832.8		mg/Kg		83	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	815.4		mg/Kg		82	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*98*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

Lab Sample ID: LCSD 880-46977/3-A
Matrix: Solid
Analysis Batch: 46917

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 46977

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	878.3		mg/Kg		88	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	830.0		mg/Kg		83	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

Lab Sample ID: 890-4153-A-1-G MS
Matrix: Solid
Analysis Batch: 46917

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 46977

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	998	860.3		mg/Kg		84	70 - 130		
Diesel Range Organics (Over C10-C28)	59.4		998	1043		mg/Kg		99	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*117*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4155-1
SDG: 03C1558180

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

Lab Sample ID: 890-4153-A-1-H MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46917 — **Prep Batch: 46977**

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	997	988.5		mg/Kg		97	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	59.4		997	883.4		mg/Kg		83	70 - 130	17	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*98*		*70 - 130*
o-Terphenyl	*89*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-46940/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 46950

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/22/23 14:06	1

Lab Sample ID: LCS 880-46940/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 46950

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	245.5		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-46940/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 46950

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	240.7		mg/Kg		96	90 - 110	2	20

Lab Sample ID: 890-4155-1 MS — **Client Sample ID: FS12**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 46950

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	2090	F1	1260	3544	F1	mg/Kg		116	90 - 110		

Lab Sample ID: 890-4155-1 MSD — **Client Sample ID: FS12**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 46950

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2090	F1	1260	3536	F1	mg/Kg		115	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4155-1
SDG: 03C1558180

GC VOA

Analysis Batch: 46926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4155-1	FS12	Total/NA	Solid	8021B	46933
890-4155-2	FS13	Total/NA	Solid	8021B	46933
890-4155-3	FS14	Total/NA	Solid	8021B	46933
MB 880-46926/8	Method Blank	Total/NA	Solid	8021B	
MB 880-46933/5-A	Method Blank	Total/NA	Solid	8021B	46933
LCS 880-46933/1-A	Lab Control Sample	Total/NA	Solid	8021B	46933
LCSD 880-46933/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	46933
880-24905-A-79-D MS	Matrix Spike	Total/NA	Solid	8021B	46933
880-24905-A-79-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	46933

Prep Batch: 46933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4155-1	FS12	Total/NA	Solid	5035	
890-4155-2	FS13	Total/NA	Solid	5035	
890-4155-3	FS14	Total/NA	Solid	5035	
MB 880-46933/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-46933/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-46933/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-24905-A-79-D MS	Matrix Spike	Total/NA	Solid	5035	
880-24905-A-79-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 47054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4155-1	FS12	Total/NA	Solid	Total BTEX	
890-4155-2	FS13	Total/NA	Solid	Total BTEX	
890-4155-3	FS14	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 46917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4155-1	FS12	Total/NA	Solid	8015B NM	46977
890-4155-2	FS13	Total/NA	Solid	8015B NM	46977
890-4155-3	FS14	Total/NA	Solid	8015B NM	46977
MB 880-46977/1-A	Method Blank	Total/NA	Solid	8015B NM	46977
LCS 880-46977/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	46977
LCSD 880-46977/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	46977
890-4153-A-1-G MS	Matrix Spike	Total/NA	Solid	8015B NM	46977
890-4153-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	46977

Prep Batch: 46977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4155-1	FS12	Total/NA	Solid	8015NM Prep	
890-4155-2	FS13	Total/NA	Solid	8015NM Prep	
890-4155-3	FS14	Total/NA	Solid	8015NM Prep	
MB 880-46977/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-46977/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-46977/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4153-A-1-G MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4153-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4155-1
SDG: 03C1558180

GC Semi VOA

Analysis Batch: 47028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4155-1	FS12	Total/NA	Solid	8015 NM	
890-4155-2	FS13	Total/NA	Solid	8015 NM	
890-4155-3	FS14	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 46940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4155-1	FS12	Soluble	Solid	DI Leach	
890-4155-2	FS13	Soluble	Solid	DI Leach	
890-4155-3	FS14	Soluble	Solid	DI Leach	
MB 880-46940/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-46940/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-46940/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4155-1 MS	FS12	Soluble	Solid	DI Leach	
890-4155-1 MSD	FS12	Soluble	Solid	DI Leach	

Analysis Batch: 46950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4155-1	FS12	Soluble	Solid	300.0	46940
890-4155-2	FS13	Soluble	Solid	300.0	46940
890-4155-3	FS14	Soluble	Solid	300.0	46940
MB 880-46940/1-A	Method Blank	Soluble	Solid	300.0	46940
LCS 880-46940/2-A	Lab Control Sample	Soluble	Solid	300.0	46940
LCSD 880-46940/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	46940
890-4155-1 MS	FS12	Soluble	Solid	300.0	46940
890-4155-1 MSD	FS12	Soluble	Solid	300.0	46940

Lab Chronicle

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4155-1
SDG: 03C1558180

Client Sample ID: FS12

Date Collected: 02/20/23 12:25
Date Received: 02/20/23 14:31

Lab Sample ID: 890-4155-1
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			4.99 g	5 mL	46933	02/22/23 09:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46926	02/23/23 07:44	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			47054	02/23/23 12:22	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47028	02/23/23 11:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	46977	02/22/23 16:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46917	02/23/23 02:45	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	46940	02/22/23 11:49	KS	EET MID
Soluble	Analysis	300.0		5			46950	02/22/23 14:23	CH	EET MID

Client Sample ID: FS13

Date Collected: 02/20/23 10:50
Date Received: 02/20/23 14:31

Lab Sample ID: 890-4155-2
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			5.03 g	5 mL	46933	02/22/23 09:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46926	02/23/23 08:04	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			47054	02/23/23 12:22	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47028	02/23/23 11:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	46977	02/22/23 16:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46917	02/23/23 03:06	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	46940	02/22/23 11:49	KS	EET MID
Soluble	Analysis	300.0		10			46950	02/22/23 14:41	CH	EET MID

Client Sample ID: FS14

Date Collected: 02/20/23 12:30
Date Received: 02/20/23 14:31

Lab Sample ID: 890-4155-3
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			5.05 g	5 mL	46933	02/22/23 09:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46926	02/23/23 08:25	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			47054	02/23/23 12:22	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47028	02/23/23 11:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	46977	02/22/23 16:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46917	02/23/23 03:28	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	46940	02/22/23 11:49	KS	EET MID
Soluble	Analysis	300.0		10			46950	02/22/23 14:46	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: ADU 641

Job ID: 890-4155-1
SDG: 03C1558180

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	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4155-1
SDG: 03C1558180

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: ADU 641

Job ID: 890-4155-1
SDG: 03C1558180

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4155-1	FS12	Solid	02/20/23 12:25	02/20/23 14:31	16'
890-4155-2	FS13	Solid	02/20/23 10:50	02/20/23 14:31	24'
890-4155-3	FS14	Solid	02/20/23 12:30	02/20/23 14:31	24'

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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: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337.257.8307	Email:	tmorrissey@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:	ADU 141	Turn Around	
Project Number:	03L1558180	☐ Routine ☑ Rush	
Project Location:	32.53388, -104.20765	Due Date:	24 hr
Sampler's Name:	Meredith Roberts	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:	TNM 007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.2	
Total Containers:		Corrected Temperature:	2.0	

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_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	BTEX	Chlorides	TPH
FS12	S	2/20/23	1225	16'	C	1		X	X	X
FS13	↓	↓	1050	24'	↓	↓		↓	↓	↓
FS14	↓	↓	1230	24'	↓	↓		↓	↓	↓

MRC

890-4155 Chain of Custody

Sample Comments

Incident #:
NAPP2302355577

Cost Center:
1136141001

mroberts@ensolum.com

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		2.20.23 1431	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4155-1
SDG Number: 03C1558180

Login Number: 4155
List Number: 1
Creator: Stutzman, Amanda

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: 890-4155-1
SDG Number: 03C1558180

Login Number: 4155
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/22/23 12:07 PM

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: Tacoma Morrissey
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 2/27/2023 5:14:28 PM Revision 1

JOB DESCRIPTION

ADU 641
SDG NUMBER 03C1558180

JOB NUMBER

890-4156-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

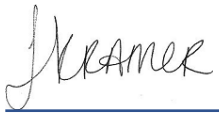
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



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2/27/2023 5:14:28 PM
Revision 1

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

Client: Ensolum
Project/Site: ADU 641

Laboratory Job ID: 890-4156-1
SDG: 03C1558180

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

Qualifiers

GC VOA

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

Job ID: 890-4156-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4156-1

REVISION

The report being provided is a revision of the original report sent on 2/23/2023. The report (revision 1) is being revised due to Per client email, took sample PH03B off hold..

Report revision history

Receipt
The samples were received on 2/20/2023 2:31 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH03 (890-4156-1), PH03A (890-4156-2) and PH03B (890-4156-3).

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (MB 880-47117/1-A). 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: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-46940 and analytical batch 880-46950 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-47204 and analytical batch 880-47258 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was 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: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

Client Sample ID: PH03
Date Collected: 02/20/23 12:55
Date Received: 02/20/23 14:31
Sample Depth: 26'

Lab Sample ID: 890-4156-1
Matrix: Solid

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		02/22/23 09:33	02/23/23 09:10	1
Toluene	<0.00198	U	0.00198		mg/Kg		02/22/23 09:33	02/23/23 09:10	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		02/22/23 09:33	02/23/23 09:10	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		02/22/23 09:33	02/23/23 09:10	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		02/22/23 09:33	02/23/23 09:10	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		02/22/23 09:33	02/23/23 09:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*02/22/23 09:33*	*02/23/23 09:10*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*02/22/23 09:33*	*02/23/23 09:10*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			02/23/23 12:22	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			02/23/23 11:59	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		02/22/23 16:36	02/23/23 03:49	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/22/23 16:36	02/23/23 03:49	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/22/23 16:36	02/23/23 03:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*02/22/23 16:36*	*02/23/23 03:49*	*1*
o-Terphenyl	*95*		*70 - 130*	*02/22/23 16:36*	*02/23/23 03:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2080**		25.3		mg/Kg			02/22/23 14:52	5

Client Sample ID: PH03A
Date Collected: 02/20/23 13:00
Date Received: 02/20/23 14:31
Sample Depth: 28'

Lab Sample ID: 890-4156-2
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		02/22/23 09:33	02/23/23 09:31	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/22/23 09:33	02/23/23 09:31	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/22/23 09:33	02/23/23 09:31	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/22/23 09:33	02/23/23 09:31	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/22/23 09:33	02/23/23 09:31	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/22/23 09:33	02/23/23 09:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*02/22/23 09:33*	*02/23/23 09:31*	*1*

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

Client Sample ID: PH03A
Date Collected: 02/20/23 13:00
Date Received: 02/20/23 14:31
Sample Depth: 28'

Lab Sample ID: 890-4156-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*02/22/23 09:33*	*02/23/23 09:31*	*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			02/23/23 12:22	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			02/23/23 11:59	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		02/22/23 16:36	02/23/23 04:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/22/23 16:36	02/23/23 04:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/22/23 16:36	02/23/23 04:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*02/22/23 16:36*	*02/23/23 04:10*	*1*
o-Terphenyl	*87*		*70 - 130*	*02/22/23 16:36*	*02/23/23 04:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**955**		5.04	mg/Kg			02/22/23 14:58	1

Client Sample ID: PH03B
Date Collected: 02/20/23 13:05
Date Received: 02/20/23 14:31
Sample Depth: 30'

Lab Sample ID: 890-4156-3
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		02/23/23 09:25	02/24/23 04:14	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/23/23 09:25	02/24/23 04:14	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/23/23 09:25	02/24/23 04:14	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/23/23 09:25	02/24/23 04:14	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/23/23 09:25	02/24/23 04:14	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/23/23 09:25	02/24/23 04:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*02/23/23 09:25*	*02/24/23 04:14*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*02/23/23 09:25*	*02/24/23 04:14*	*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			02/24/23 14:46	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			02/24/23 13:21	1

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

Client Sample ID: PH03B

Date Collected: 02/20/23 13:05
Date Received: 02/20/23 14:31
Sample Depth: 30'

Lab Sample ID: 890-4156-3

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	<50.0	U	50.0		mg/Kg		02/23/23 17:07	02/24/23 05:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/23/23 17:07	02/24/23 05:41	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/23/23 17:07	02/24/23 05:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*02/23/23 17:07*	*02/24/23 05:41*	*1*
o-Terphenyl	*99*		*70 - 130*	*02/23/23 17:07*	*02/24/23 05:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**572**		4.95		mg/Kg			02/27/23 14:48	1

Surrogate Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

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)
880-24905-A-79-D MS	Matrix Spike	111	112
880-24905-A-79-E MSD	Matrix Spike Duplicate	119	113
880-24920-A-1-D MS	Matrix Spike	118	105
880-24920-A-1-E MSD	Matrix Spike Duplicate	115	96
890-4156-1	PH03	112	110
890-4156-2	PH03A	111	113
890-4156-3	PH03B	114	93
LCS 880-46933/1-A	Lab Control Sample	110	113
LCS 880-47007/1-A	Lab Control Sample	122	100
LCSD 880-46933/2-A	Lab Control Sample Dup	109	113
LCSD 880-47007/2-A	Lab Control Sample Dup	110	104
MB 880-46926/8	Method Blank	105	105
MB 880-46933/5-A	Method Blank	105	104
MB 880-47001/5-A	Method Blank	76	87
MB 880-47007/5-A	Method Blank	78	94

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)
890-4138-A-1-D MS	Matrix Spike	99	97
890-4138-A-1-E MSD	Matrix Spike Duplicate	101	100
890-4153-A-1-G MS	Matrix Spike	117	104
890-4153-A-1-H MSD	Matrix Spike Duplicate	98	89
890-4156-1	PH03	94	95
890-4156-2	PH03A	84	87
890-4156-3	PH03B	87	99
LCS 880-46977/2-A	Lab Control Sample	98	88
LCS 880-47117/2-A	Lab Control Sample	97	104
LCSD 880-46977/3-A	Lab Control Sample Dup	100	91
LCSD 880-47117/3-A	Lab Control Sample Dup	95	103
MB 880-46977/1-A	Method Blank	126	127
MB 880-47117/1-A	Method Blank	132 S1+	155 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-46926/8
Matrix: Solid
Analysis Batch: 46926

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg			02/22/23 13:39	1
Toluene	<0.00200	U	0.00200		mg/Kg			02/22/23 13:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg			02/22/23 13:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg			02/22/23 13:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg			02/22/23 13:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg			02/22/23 13:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*02/22/23 13:39*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*		*02/22/23 13:39*	*1*

Lab Sample ID: MB 880-46933/5-A
Matrix: Solid
Analysis Batch: 46926

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 46933

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/22/23 09:33	02/23/23 01:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/22/23 09:33	02/23/23 01:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/22/23 09:33	02/23/23 01:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/22/23 09:33	02/23/23 01:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/22/23 09:33	02/23/23 01:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/22/23 09:33	02/23/23 01:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*02/22/23 09:33*	*02/23/23 01:41*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*02/22/23 09:33*	*02/23/23 01:41*	*1*

Lab Sample ID: LCS 880-46933/1-A
Matrix: Solid
Analysis Batch: 46926

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46933

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1029		mg/Kg		103	70 - 130		
Toluene			0.100	0.09799		mg/Kg		98	70 - 130		
Ethylbenzene			0.100	0.1052		mg/Kg		105	70 - 130		
m-Xylene & p-Xylene			0.200	0.2284		mg/Kg		114	70 - 130		
o-Xylene			0.100	0.1113		mg/Kg		111	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: LCSD 880-46933/2-A
Matrix: Solid
Analysis Batch: 46926

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 46933

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1044		mg/Kg		104	70 - 130	1	35

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

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

Lab Sample ID: LCSD 880-46933/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46926 — **Prep Batch: 46933**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1007		mg/Kg		101	70 - 130	3	35
Ethylbenzene			0.100	0.1051		mg/Kg		105	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.2261		mg/Kg		113	70 - 130	1	35
o-Xylene			0.100	0.1105		mg/Kg		110	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: 880-24905-A-79-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46926 — **Prep Batch: 46933**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.101	0.1098		mg/Kg		109	70 - 130
Toluene	<0.00200	U	0.101	0.1066		mg/Kg		106	70 - 130
Ethylbenzene	<0.00200	U	0.101	0.1125		mg/Kg		111	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.202	0.2429		mg/Kg		120	70 - 130
o-Xylene	<0.00200	U	0.101	0.1187		mg/Kg		117	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 880-24905-A-79-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46926 — **Prep Batch: 46933**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0994	0.1097		mg/Kg		110	70 - 130	0	35
Toluene	<0.00200	U	0.0994	0.1076		mg/Kg		108	70 - 130	1	35
Ethylbenzene	<0.00200	U	0.0994	0.1143		mg/Kg		115	70 - 130	2	35
m-Xylene & p-Xylene	<0.00401	U	0.199	0.2473		mg/Kg		124	70 - 130	2	35
o-Xylene	<0.00200	U	0.0994	0.1213		mg/Kg		122	70 - 130	2	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: MB 880-47001/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 47000 — **Prep Batch: 47001**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/23/23 08:38	02/23/23 11:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/23/23 08:38	02/23/23 11:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/23/23 08:38	02/23/23 11:47	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/23/23 08:38	02/23/23 11:47	1

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

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

Lab Sample ID: MB 880-47001/5-A
Matrix: Solid
Analysis Batch: 47000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47001

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/23/23 08:38	02/23/23 11:47	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/23/23 08:38	02/23/23 11:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*02/23/23 08:38*	*02/23/23 11:47*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*02/23/23 08:38*	*02/23/23 11:47*	*1*

Lab Sample ID: MB 880-47007/5-A
Matrix: Solid
Analysis Batch: 47000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47007

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/23/23 09:25	02/23/23 23:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/23/23 09:25	02/23/23 23:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/23/23 09:25	02/23/23 23:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/23/23 09:25	02/23/23 23:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/23/23 09:25	02/23/23 23:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/23/23 09:25	02/23/23 23:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*02/23/23 09:25*	*02/23/23 23:25*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*02/23/23 09:25*	*02/23/23 23:25*	*1*

Lab Sample ID: LCS 880-47007/1-A
Matrix: Solid
Analysis Batch: 47000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47007

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09393		mg/Kg		94	70 - 130		
Toluene			0.100	0.09350		mg/Kg		93	70 - 130		
Ethylbenzene			0.100	0.1024		mg/Kg		102	70 - 130		
m-Xylene & p-Xylene			0.200	0.2149		mg/Kg		107	70 - 130		
o-Xylene			0.100	0.1176		mg/Kg		118	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-47007/2-A
Matrix: Solid
Analysis Batch: 47000

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 47007

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08161		mg/Kg		82	70 - 130	14	35
Toluene			0.100	0.08564		mg/Kg		86	70 - 130	9	35
Ethylbenzene			0.100	0.09059		mg/Kg		91	70 - 130	12	35
m-Xylene & p-Xylene			0.200	0.1900		mg/Kg		95	70 - 130	12	35
o-Xylene			0.100	0.09988		mg/Kg		100	70 - 130	16	35

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: 880-24920-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 47000 — **Prep Batch: 47007**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.100	0.09590		mg/Kg		96	70 - 130
Toluene	<0.00200	U	0.100	0.09571		mg/Kg		94	70 - 130
Ethylbenzene	<0.00200	U	0.100	0.1007		mg/Kg		99	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.201	0.2081		mg/Kg		102	70 - 130
o-Xylene	<0.00200	U	0.100	0.1062		mg/Kg		105	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	118		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 880-24920-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 47000 — **Prep Batch: 47007**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0990	0.08695		mg/Kg		88	70 - 130	10	35
Toluene	<0.00200	U	0.0990	0.08891		mg/Kg		89	70 - 130	7	35
Ethylbenzene	<0.00200	U	0.0990	0.09431		mg/Kg		94	70 - 130	7	35
m-Xylene & p-Xylene	<0.00399	U	0.198	0.1968		mg/Kg		98	70 - 130	6	35
o-Xylene	<0.00200	U	0.0990	0.09940		mg/Kg		99	70 - 130	7	35

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

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

Lab Sample ID: MB 880-46977/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46917 — **Prep Batch: 46977**

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		02/22/23 16:36	02/22/23 21:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/22/23 16:36	02/22/23 21:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/22/23 16:36	02/22/23 21:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	126		70 - 130	02/22/23 16:36	02/22/23 21:03	1
o-Terphenyl	127		70 - 130	02/22/23 16:36	02/22/23 21:03	1

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

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

Lab Sample ID: LCS 880-46977/2-A
Matrix: Solid
Analysis Batch: 46917

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46977

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	832.8		mg/Kg		83	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	815.4		mg/Kg		82	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*98*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

Lab Sample ID: LCSD 880-46977/3-A
Matrix: Solid
Analysis Batch: 46917

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 46977

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	878.3		mg/Kg		88	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	830.0		mg/Kg		83	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

Lab Sample ID: 890-4153-A-1-G MS
Matrix: Solid
Analysis Batch: 46917

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 46977

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	998	860.3		mg/Kg		84	70 - 130		
Diesel Range Organics (Over C10-C28)	59.4		998	1043		mg/Kg		99	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*117*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

Lab Sample ID: 890-4153-A-1-H MSD
Matrix: Solid
Analysis Batch: 46917

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 46977

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	997	988.5		mg/Kg		97	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	59.4		997	883.4		mg/Kg		83	70 - 130	17	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*98*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

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

Lab Sample ID: 890-4153-A-1-H MSD
Matrix: Solid
Analysis Batch: 46917

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 46977

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	89		70 - 130

Lab Sample ID: MB 880-47117/1-A
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47117

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		02/23/23 17:07	02/23/23 20:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/23/23 17:07	02/23/23 20:30	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/23/23 17:07	02/23/23 20:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	132	S1+	70 - 130	02/23/23 17:07	02/23/23 20:30	1
o-Terphenyl	155	S1+	70 - 130	02/23/23 17:07	02/23/23 20:30	1

Lab Sample ID: LCS 880-47117/2-A
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47117

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1169		mg/Kg		117	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1008		mg/Kg		101	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	104		70 - 130

Lab Sample ID: LCSD 880-47117/3-A
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 47117

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1067		mg/Kg		107	70 - 130	9	20
Diesel Range Organics (Over C10-C28)			1000	999.2		mg/Kg		100	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	103		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

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

Lab Sample ID: 890-4138-A-1-D MS
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 47117

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	1000	969.6		mg/Kg		92	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U	1000	936.4		mg/Kg		92	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Lab Sample ID: 890-4138-A-1-E MSD
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 47117

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	1000	997.9		mg/Kg		95	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.8	U	1000	967.7		mg/Kg		95	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*101*		*70 - 130*
o-Terphenyl	*100*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-46940/1-A
Matrix: Solid
Analysis Batch: 46950

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/22/23 14:06	1

Lab Sample ID: LCS 880-46940/2-A
Matrix: Solid
Analysis Batch: 46950

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	245.5		mg/Kg		98	90 - 110

Lab Sample ID: LCSD 880-46940/3-A
Matrix: Solid
Analysis Batch: 46950

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	240.7		mg/Kg		96	90 - 110	2	20

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-4155-A-1-C MS
Matrix: Solid
Analysis Batch: 46950

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	2090	F1	1260	3544	F1	mg/Kg		116	90 - 110

Lab Sample ID: 890-4155-A-1-D MSD
Matrix: Solid
Analysis Batch: 46950

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	2090	F1	1260	3536	F1	mg/Kg		115	90 - 110	0	20

Lab Sample ID: 890-4162-A-24-B MS
Matrix: Solid
Analysis Batch: 46950

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	376	F1	248	584.2	F1	mg/Kg		84	90 - 110

Lab Sample ID: 890-4162-A-24-C MSD
Matrix: Solid
Analysis Batch: 46950

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	376	F1	248	615.7		mg/Kg		97	90 - 110	5	20

Lab Sample ID: MB 880-47204/1-A
Matrix: Solid
Analysis Batch: 47258

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/26/23 17:34	1

Lab Sample ID: LCS 880-47204/2-A
Matrix: Solid
Analysis Batch: 47258

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	247.6		mg/Kg		99	90 - 110

Lab Sample ID: LCSD 880-47204/3-A
Matrix: Solid
Analysis Batch: 47258

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	250.6		mg/Kg		100	90 - 110	1	20

Lab Sample ID: 880-25164-A-5-B MS
Matrix: Solid
Analysis Batch: 47258

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	1080		249	1251	4	mg/Kg		68	90 - 110

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-25164-A-5-C MSD
Matrix: Solid
Analysis Batch: 47258

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	1080		249	1259	4	mg/Kg		71	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

GC VOA

Analysis Batch: 46926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4156-1	PH03	Total/NA	Solid	8021B	46933
890-4156-2	PH03A	Total/NA	Solid	8021B	46933
MB 880-46926/8	Method Blank	Total/NA	Solid	8021B	
MB 880-46933/5-A	Method Blank	Total/NA	Solid	8021B	46933
LCS 880-46933/1-A	Lab Control Sample	Total/NA	Solid	8021B	46933
LCSD 880-46933/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	46933
880-24905-A-79-D MS	Matrix Spike	Total/NA	Solid	8021B	46933
880-24905-A-79-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	46933

Prep Batch: 46933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4156-1	PH03	Total/NA	Solid	5035	
890-4156-2	PH03A	Total/NA	Solid	5035	
MB 880-46933/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-46933/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-46933/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-24905-A-79-D MS	Matrix Spike	Total/NA	Solid	5035	
880-24905-A-79-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 47000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4156-3	PH03B	Total/NA	Solid	8021B	47007
MB 880-47001/5-A	Method Blank	Total/NA	Solid	8021B	47001
MB 880-47007/5-A	Method Blank	Total/NA	Solid	8021B	47007
LCS 880-47007/1-A	Lab Control Sample	Total/NA	Solid	8021B	47007
LCSD 880-47007/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	47007
880-24920-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	47007
880-24920-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	47007

Prep Batch: 47001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-47001/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 47007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4156-3	PH03B	Total/NA	Solid	5035	
MB 880-47007/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-47007/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-47007/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-24920-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-24920-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 47055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4156-1	PH03	Total/NA	Solid	Total BTEX	
890-4156-2	PH03A	Total/NA	Solid	Total BTEX	
890-4156-3	PH03B	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

GC Semi VOA

Analysis Batch: 46917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4156-1	PH03	Total/NA	Solid	8015B NM	46977
890-4156-2	PH03A	Total/NA	Solid	8015B NM	46977
MB 880-46977/1-A	Method Blank	Total/NA	Solid	8015B NM	46977
LCS 880-46977/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	46977
LCSD 880-46977/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	46977
890-4153-A-1-G MS	Matrix Spike	Total/NA	Solid	8015B NM	46977
890-4153-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	46977

Prep Batch: 46977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4156-1	PH03	Total/NA	Solid	8015NM Prep	
890-4156-2	PH03A	Total/NA	Solid	8015NM Prep	
MB 880-46977/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-46977/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-46977/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4153-A-1-G MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4153-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 46994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4156-3	PH03B	Total/NA	Solid	8015B NM	47117
MB 880-47117/1-A	Method Blank	Total/NA	Solid	8015B NM	47117
LCS 880-47117/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	47117
LCSD 880-47117/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	47117
890-4138-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	47117
890-4138-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	47117

Analysis Batch: 47029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4156-1	PH03	Total/NA	Solid	8015 NM	
890-4156-2	PH03A	Total/NA	Solid	8015 NM	
890-4156-3	PH03B	Total/NA	Solid	8015 NM	

Prep Batch: 47117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4156-3	PH03B	Total/NA	Solid	8015NM Prep	
MB 880-47117/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-47117/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-47117/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4138-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4138-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 46940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4156-1	PH03	Soluble	Solid	DI Leach	
890-4156-2	PH03A	Soluble	Solid	DI Leach	
MB 880-46940/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-46940/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-46940/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

HPLC/IC (Continued)

Leach Batch: 46940 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4155-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4155-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-4162-A-24-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4162-A-24-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 46950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4156-1	PH03	Soluble	Solid	300.0	46940
890-4156-2	PH03A	Soluble	Solid	300.0	46940
MB 880-46940/1-A	Method Blank	Soluble	Solid	300.0	46940
LCS 880-46940/2-A	Lab Control Sample	Soluble	Solid	300.0	46940
LCSD 880-46940/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	46940
890-4155-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	46940
890-4155-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	46940
890-4162-A-24-B MS	Matrix Spike	Soluble	Solid	300.0	46940
890-4162-A-24-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	46940

Leach Batch: 47204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4156-3	PH03B	Soluble	Solid	DI Leach	
MB 880-47204/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-47204/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-47204/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-25164-A-5-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-25164-A-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 47258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4156-3	PH03B	Soluble	Solid	300.0	47204
MB 880-47204/1-A	Method Blank	Soluble	Solid	300.0	47204
LCS 880-47204/2-A	Lab Control Sample	Soluble	Solid	300.0	47204
LCSD 880-47204/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	47204
880-25164-A-5-B MS	Matrix Spike	Soluble	Solid	300.0	47204
880-25164-A-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	47204

Lab Chronicle

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

Client Sample ID: PH03
Date Collected: 02/20/23 12:55
Date Received: 02/20/23 14:31

Lab Sample ID: 890-4156-1
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			5.04 g	5 mL	46933	02/22/23 09:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46926	02/23/23 09:10	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			47055	02/23/23 12:22	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47029	02/23/23 11:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	46977	02/22/23 16:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46917	02/23/23 03:49	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	46940	02/22/23 11:49	KS	EET MID
Soluble	Analysis	300.0		5			46950	02/22/23 14:52	CH	EET MID

Client Sample ID: PH03A
Date Collected: 02/20/23 13:00
Date Received: 02/20/23 14:31

Lab Sample ID: 890-4156-2
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	46933	02/22/23 09:33	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	46926	02/23/23 09:31	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			47055	02/23/23 12:22	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47029	02/23/23 11:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	46977	02/22/23 16:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46917	02/23/23 04:10	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	46940	02/22/23 11:49	KS	EET MID
Soluble	Analysis	300.0		1			46950	02/22/23 14:58	CH	EET MID

Client Sample ID: PH03B
Date Collected: 02/20/23 13:05
Date Received: 02/20/23 14:31

Lab Sample ID: 890-4156-3
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			5.03 g	5 mL	47007	02/23/23 09:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47000	02/24/23 04:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47055	02/24/23 14:46	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47029	02/24/23 13:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	47117	02/23/23 17:07	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46994	02/24/23 05:41	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	47204	02/24/23 15:10	KS	EET MID
Soluble	Analysis	300.0		1			47258	02/27/23 14:48	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: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

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	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

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: ADU 641

Job ID: 890-4156-1
SDG: 03C1558180

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4156-1	PH03	Solid	02/20/23 12:55	02/20/23 14:31	26'
890-4156-2	PH03A	Solid	02/20/23 13:00	02/20/23 14:31	28'
890-4156-3	PH03B	Solid	02/20/23 13:05	02/20/23 14:31	30'

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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: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	3104 E Greene St / XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337-257-8307 Email:		tmorrissey@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:	ADU 641	Turn Around	
Project Number:	03C1558180	☐ Routine ☑ Rush	
Project Location:	32.53388, -104.20765	Due Date:	24hr
Sampler's Name:	Meredith Roberts	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:	TMH-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.2
Total Containers:		Corrected Temperature:	2.0

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2SO_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

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	BTEX	TPH	Chlorides	Sample Comments
PH03	S	2/20/23	1255	26'	G	1	X	X	X	Incident #: nAPP2302355577
PH03A	↓	↓	1300	28'	↓	↓	↓	↓	↓	
PH03B	↓	↓	1305	30'	↓	↓	↓	↓	↓	HOLD
										Cost Center: 1136141001
										mroberts@ensolum.com

890-4156 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag 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	2-20-23 1431	3	4	
5	6				

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4156-1
SDG Number: 03C1558180

Login Number: 4156
List Number: 1
Creator: Stutzman, Amanda

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: 890-4156-1
SDG Number: 03C1558180

Login Number: 4156
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/22/23 12:07 PM

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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

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JOB DESCRIPTION

ADU 641
SDG NUMBER 03C1558180

JOB NUMBER

890-4171-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

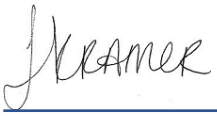
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



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

Client: Ensolum
Project/Site: ADU 641

Laboratory Job ID: 890-4171-1
SDG: 03C1558180

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4171-1
SDG: 03C1558180

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD 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/Site: ADU 641

Job ID: 890-4171-1
SDG: 03C1558180

Job ID: 890-4171-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4171-1

Receipt
The samples were received on 2/22/2023 11:21 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: FS03A (890-4171-1) and FS05A (890-4171-2).

GC VOA
Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-47001 and analytical batch 880-47000 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA
Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-47003 and analytical batch 880-46994 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28).

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-46850 and analytical batch 880-47079 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was 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: ADU 641

Job ID: 890-4171-1
SDG: 03C1558180

Client Sample ID: FS03A
Date Collected: 02/22/23 09:55
Date Received: 02/22/23 11:21
Sample Depth: 5

Lab Sample ID: 890-4171-1
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		02/23/23 08:38	02/23/23 13:30	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/23/23 08:38	02/23/23 13:30	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/23/23 08:38	02/23/23 13:30	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402		mg/Kg		02/23/23 08:38	02/23/23 13:30	1
o-Xylene	<0.00201	U *+	0.00201		mg/Kg		02/23/23 08:38	02/23/23 13:30	1
Xylenes, Total	<0.00402	U *+	0.00402		mg/Kg		02/23/23 08:38	02/23/23 13:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*02/23/23 08:38*	*02/23/23 13:30*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*02/23/23 08:38*	*02/23/23 13:30*	*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			02/23/23 15:28	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			02/23/23 16:21	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 *1	49.9		mg/Kg		02/23/23 09:12	02/23/23 14:16	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9		mg/Kg		02/23/23 09:12	02/23/23 14:16	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/23/23 09:12	02/23/23 14:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*02/23/23 09:12*	*02/23/23 14:16*	*1*
o-Terphenyl	*124*		*70 - 130*	*02/23/23 09:12*	*02/23/23 14:16*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3530**		24.9		mg/Kg			02/23/23 15:47	5

Client Sample ID: FS05A
Date Collected: 02/22/23 10:35
Date Received: 02/22/23 11:21
Sample Depth: 5.5

Lab Sample ID: 890-4171-2
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		02/23/23 08:38	02/23/23 13:51	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/23/23 08:38	02/23/23 13:51	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/23/23 08:38	02/23/23 13:51	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		02/23/23 08:38	02/23/23 13:51	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		02/23/23 08:38	02/23/23 13:51	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		02/23/23 08:38	02/23/23 13:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*02/23/23 08:38*	*02/23/23 13:51*	*1*

Client Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4171-1
SDG: 03C1558180

Client Sample ID: FS05A
Date Collected: 02/22/23 10:35
Date Received: 02/22/23 11:21
Sample Depth: 5.5

Lab Sample ID: 890-4171-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*02/23/23 08:38*	*02/23/23 13:51*	*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			02/23/23 15:28	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			02/23/23 16:21	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 *1	49.9		mg/Kg		02/23/23 09:12	02/23/23 14:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9		mg/Kg		02/23/23 09:12	02/23/23 14:38	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/23/23 09:12	02/23/23 14:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*02/23/23 09:12*	*02/23/23 14:38*	*1*
o-Terphenyl	*109*		*70 - 130*	*02/23/23 09:12*	*02/23/23 14:38*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**149**		4.95		mg/Kg			02/23/23 15:53	1

Surrogate Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4171-1
SDG: 03C1558180

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)										
880-25089-B-1-A MS	Matrix Spike	120	117										
880-25089-B-1-B MSD	Matrix Spike Duplicate	130	117										
890-4171-1	FS03A	107	80										
890-4171-2	FS05A	94	83										
LCS 880-47001/1-A	Lab Control Sample	109	104										
LCSD 880-47001/2-A	Lab Control Sample Dup	119	113										
MB 880-47001/5-A	Method Blank	76	87										

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)										
890-4123-A-1-F MS	Matrix Spike	107	102										
890-4123-A-1-G MSD	Matrix Spike Duplicate	95	89										
890-4171-1	FS03A	108	124										
890-4171-2	FS05A	96	109										
LCS 880-47003/2-A	Lab Control Sample	107	116										
LCSD 880-47003/3-A	Lab Control Sample Dup	75	85										
MB 880-47003/1-A	Method Blank	110	131 S1+										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4171-1
SDG: 03C1558180

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-47001/5-A
Matrix: Solid
Analysis Batch: 47000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47001

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/23/23 08:38	02/23/23 11:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/23/23 08:38	02/23/23 11:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/23/23 08:38	02/23/23 11:47	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/23/23 08:38	02/23/23 11:47	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/23/23 08:38	02/23/23 11:47	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/23/23 08:38	02/23/23 11:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*02/23/23 08:38*	*02/23/23 11:47*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*02/23/23 08:38*	*02/23/23 11:47*	*1*

Lab Sample ID: LCS 880-47001/1-A
Matrix: Solid
Analysis Batch: 47000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47001

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1087		mg/Kg		109	70 - 130		
Toluene			0.100	0.1037		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.1062		mg/Kg		106	70 - 130		
m-Xylene & p-Xylene			0.200	0.2275		mg/Kg		114	70 - 130		
o-Xylene			0.100	0.1128		mg/Kg		113	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-47001/2-A
Matrix: Solid
Analysis Batch: 47000

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 47001

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1182		mg/Kg		118	70 - 130	8	35
Toluene			0.100	0.1152		mg/Kg		115	70 - 130	11	35
Ethylbenzene			0.100	0.1285		mg/Kg		129	70 - 130	19	35
m-Xylene & p-Xylene			0.200	0.2723	*+	mg/Kg		136	70 - 130	18	35
o-Xylene			0.100	0.1345	*+	mg/Kg		134	70 - 130	18	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: 880-25089-B-1-A MS
Matrix: Solid
Analysis Batch: 47000

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 47001

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00176	U	0.100	0.1076		mg/Kg		107	70 - 130		
Toluene	0.00341		0.100	0.1054		mg/Kg		102	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4171-1
SDG: 03C1558180

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

Lab Sample ID: 880-25089-B-1-A MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 47000 — **Prep Batch: 47001**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00176	U	0.100	0.1054		mg/Kg		104	70 - 130
m-Xylene & p-Xylene	0.0108	*+	0.200	0.2303		mg/Kg		110	70 - 130
o-Xylene	0.00345	*+	0.100	0.1143		mg/Kg		111	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*

Lab Sample ID: 880-25089-B-1-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 47000 — **Prep Batch: 47001**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00176	U	0.0998	0.1219		mg/Kg		122	70 - 130	12	35
Toluene	0.00341		0.0998	0.1138		mg/Kg		111	70 - 130	8	35
Ethylbenzene	<0.00176	U	0.0998	0.1225		mg/Kg		122	70 - 130	15	35
m-Xylene & p-Xylene	0.0108	*+	0.200	0.2691		mg/Kg		129	70 - 130	16	35
o-Xylene	0.00345	*+	0.0998	0.1333		mg/Kg		130	70 - 130	15	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*

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

Lab Sample ID: MB 880-47003/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46994 — **Prep Batch: 47003**

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		02/23/23 09:12	02/23/23 08:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/23/23 09:12	02/23/23 08:36	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/23/23 09:12	02/23/23 08:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*02/23/23 09:12*	*02/23/23 08:36*	*1*
o-Terphenyl	*131*	*S1+*	*70 - 130*	*02/23/23 09:12*	*02/23/23 08:36*	*1*

Lab Sample ID: LCS 880-47003/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 46994 — **Prep Batch: 47003**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1174		mg/Kg		117	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1103		mg/Kg		110	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4171-1
SDG: 03C1558180

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

Lab Sample ID: LCS 880-47003/2-A
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47003

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	116		70 - 130

Lab Sample ID: LCSD 880-47003/3-A
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 47003

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	908.0	*1	mg/Kg		91	70 - 130	26	20
Diesel Range Organics (Over C10-C28)			1000	806.6	*1	mg/Kg		81	70 - 130	31	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	75		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 890-4123-A-1-F MS
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 47003

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	999	1211		mg/Kg		119	70 - 130
Diesel Range Organics (Over C10-C28)	76.8	*1	999	1121		mg/Kg		105	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	102		70 - 130

Lab Sample ID: 890-4123-A-1-G MSD
Matrix: Solid
Analysis Batch: 46994

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 47003

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	<49.9	U *1	998	986.4		mg/Kg		97	70 - 130	20	20
Diesel Range Organics (Over C10-C28)	76.8	*1	998	993.4		mg/Kg		92	70 - 130	12	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	89		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4171-1
SDG: 03C1558180

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-46850/1-A
Matrix: Solid
Analysis Batch: 47079

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/23/23 12:48	1

Lab Sample ID: LCS 880-46850/2-A
Matrix: Solid
Analysis Batch: 47079

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	237.9		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-46850/3-A
Matrix: Solid
Analysis Batch: 47079

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	238.3		mg/Kg		95	90 - 110	0	20

Lab Sample ID: 880-24896-A-1-F MS
Matrix: Solid
Analysis Batch: 47079

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	2280	F1	1240	3321	F1	mg/Kg		84	90 - 110		

Lab Sample ID: 880-24896-A-1-G MSD
Matrix: Solid
Analysis Batch: 47079

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	2280	F1	1240	3331	F1	mg/Kg		85	90 - 110	0	20

Lab Sample ID: 890-4149-A-1-D MS
Matrix: Solid
Analysis Batch: 47079

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	11800	F1	4980	17700	F1	mg/Kg		118	90 - 110		

Lab Sample ID: 890-4149-A-1-E MSD
Matrix: Solid
Analysis Batch: 47079

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	11800	F1	4980	18280	F1	mg/Kg		130	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4171-1
SDG: 03C1558180

GC VOA

Analysis Batch: 47000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4171-1	FS03A	Total/NA	Solid	8021B	47001
890-4171-2	FS05A	Total/NA	Solid	8021B	47001
MB 880-47001/5-A	Method Blank	Total/NA	Solid	8021B	47001
LCS 880-47001/1-A	Lab Control Sample	Total/NA	Solid	8021B	47001
LCSD 880-47001/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	47001
880-25089-B-1-A MS	Matrix Spike	Total/NA	Solid	8021B	47001
880-25089-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	47001

Prep Batch: 47001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4171-1	FS03A	Total/NA	Solid	5035	
890-4171-2	FS05A	Total/NA	Solid	5035	
MB 880-47001/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-47001/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-47001/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-25089-B-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-25089-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 47103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4171-1	FS03A	Total/NA	Solid	Total BTEX	
890-4171-2	FS05A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 46994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4171-1	FS03A	Total/NA	Solid	8015B NM	47003
890-4171-2	FS05A	Total/NA	Solid	8015B NM	47003
MB 880-47003/1-A	Method Blank	Total/NA	Solid	8015B NM	47003
LCS 880-47003/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	47003
LCSD 880-47003/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	47003
890-4123-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	47003
890-4123-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	47003

Prep Batch: 47003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4171-1	FS03A	Total/NA	Solid	8015NM Prep	
890-4171-2	FS05A	Total/NA	Solid	8015NM Prep	
MB 880-47003/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-47003/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-47003/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4123-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4123-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 47110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4171-1	FS03A	Total/NA	Solid	8015 NM	
890-4171-2	FS05A	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4171-1
SDG: 03C1558180

HPLC/IC

Leach Batch: 46850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4171-1	FS03A	Soluble	Solid	DI Leach	
890-4171-2	FS05A	Soluble	Solid	DI Leach	
MB 880-46850/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-46850/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-46850/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-24896-A-1-F MS	Matrix Spike	Soluble	Solid	DI Leach	
880-24896-A-1-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-4149-A-1-D MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4149-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 47079

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4171-1	FS03A	Soluble	Solid	300.0	46850
890-4171-2	FS05A	Soluble	Solid	300.0	46850
MB 880-46850/1-A	Method Blank	Soluble	Solid	300.0	46850
LCS 880-46850/2-A	Lab Control Sample	Soluble	Solid	300.0	46850
LCSD 880-46850/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	46850
880-24896-A-1-F MS	Matrix Spike	Soluble	Solid	300.0	46850
880-24896-A-1-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	46850
890-4149-A-1-D MS	Matrix Spike	Soluble	Solid	300.0	46850
890-4149-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	46850

Lab Chronicle

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4171-1
SDG: 03C1558180

Client Sample ID: FS03A
Date Collected: 02/22/23 09:55
Date Received: 02/22/23 11:21

Lab Sample ID: 890-4171-1
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			4.98 g	5 mL	47001	02/23/23 08:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47000	02/23/23 13:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47103	02/23/23 15:28	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47110	02/23/23 16:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	47003	02/23/23 09:12	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46994	02/23/23 14:16	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	46850	02/22/23 16:00	KS	EET MID
Soluble	Analysis	300.0		5			47079	02/23/23 15:47	CH	EET MID

Client Sample ID: FS05A
Date Collected: 02/22/23 10:35
Date Received: 02/22/23 11:21

Lab Sample ID: 890-4171-2
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			5.02 g	5 mL	47001	02/23/23 08:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47000	02/23/23 13:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47103	02/23/23 15:28	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47110	02/23/23 16:21	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	47003	02/23/23 09:12	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	46994	02/23/23 14:38	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	46850	02/22/23 16:00	KS	EET MID
Soluble	Analysis	300.0		1			47079	02/23/23 15:53	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: ADU 641

Job ID: 890-4171-1
SDG: 03C1558180

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	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: ADU 641

Job ID: 890-4171-1
SDG: 03C1558180

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: ADU 641

Job ID: 890-4171-1
SDG: 03C1558180

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4171-1	FS03A	Solid	02/22/23 09:55	02/22/23 11:21	5
890-4171-2	FS05A	Solid	02/22/23 10:35	02/22/23 11:21	5.5

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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: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337.257.8307	Email:	tmorrissey@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:	ADU 641	Turn Around	
Project Number:	03C1558180	☑ Routine ☒ Rush	
Project Location:	32.53388, -104.20765	Due Date:	24 hr
Sampler's Name:	Meredith Roberts	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:	Tmco7
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

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_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	BTEX	Chlorides	TPH	Sample Comments
FS03A	S	2/22/23	0955	5'	C	1		X	X	X	Incident #:
FS05A	↓	↓	1035	5.5'	C	1		↓	↓	↓	NAPP2302355577
										→MR	
											Cost Center: 1136141001
											mroberts@ensolum.com

890-4171 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag 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		222.231121	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Carlsbad
1089 N Canal St
Carlsbad NM 88220
Phone: 575-988-3199 Fax 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s)	COC No: 890-1144 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica Kramer@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-4171-1
Address: 1211 W Florida Ave	Due Date Requested: 2/23/2023			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: adu 641	Project #: 89000093			
Site	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
FS03A (890-4171-1)	2/22/23	09 55 Mountain		Solid			X	X	X	X	X	1	
FS05A (890-4171-2)	2/22/23	10 35 Mountain		Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank. 2	Special Instructions/QC Requirements
Empty Kit Relinquished by:	Date: Time: Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4171-1
SDG Number: 03C1558180

Login Number: 4171
List Number: 1
Creator: Clifton, Cloe

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: 890-4171-1
SDG Number: 03C1558180

Login Number: 4171
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 02/23/23 11:12 AM

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

ENSOLUM

APPENDIX D

NMOCD Notifications

From: Green, Garrett J
To: Enviro, OCD, EMNRD; Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD; Harimon, Jocelyn, EMNRD
Cc: Tacoma Morrissey; DelawareSpills /SM
Subject: RE: [EXTERNAL] XTO - Sampling Notification (Week of 2/6/23 - 2/10/23)
Date: Thursday, February 2, 2023 3:46:26 PM

[**EXTERNAL EMAIL**]

All,

We have an addition to the sampling sites below.

XTO plans to complete final sampling activities at the following sites the week of Feb 6, 2023.

- ADU 641 / nAPP2302355577
- Remuda 500 / NAPP2300441385, NAPP2300448092, NAPP2300641362
- PLU 21 BD 125H / nAPP2229145683
- Remuda 4-24-30 CTB / nAPP2233351770

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

From: Enviro, OCD, EMNRD [mailto:OCD.Enviro@emnrd.nm.gov]
Sent: Thursday, February 2, 2023 1:29 PM
To: Green, Garrett J <garrett.green@exxonmobil.com>; Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>
Subject: RE: [EXTERNAL] XTO - Sampling Notification (Week of 2/6/23 - 2/10/23)

Garrett,

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

JH

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

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Thursday, February 2, 2023 12:13 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>
Subject: [EXTERNAL] XTO - Sampling Notification (Week of 2/6/23 - 2/10/23)

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

All,

XTO plans to complete final sampling activities at the following sites the week of Feb 6, 2023.

- ADU 641 / nAPP2302355577
- Remuda 500 / NAPP2300441385, NAPP2300448092, NAPP2300641362
- PLU 21 BD 125H / nAPP2229145683

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 207153

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 207153
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAPP2302355577 AVALON DELAWARE UNIT 624, thank you. This closure is approved.	8/30/2023