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	NAPP2318139530
District RP	
Facility ID	
Application ID	

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 32.45634 Longitude -104.05469
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Big Eddy Unit 70 Battery	Site Type Tank Battery
Date Release Discovered 06/23/2023	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
B	26	21S	28E	Eddy

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) 47.68	Volume Recovered (bbls) 47.56
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	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: A failed water dump caused water to carry over into the oil tanks. Oil tanks subsequently overflowed, releasing oil to containment and pad. All free fluids were recovered. A third-party contractor has been retained for remediation purposes.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2318139530
District RP	
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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@emnrd.nm.gov, mike.bratcher@emnrd.nm.gov, Jocelyn.Harimon@emnrd.nm.gov, and Robert.Hamlet@emnrd.nm.gov on Friday, June 23, 2033 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: Garrett Green
Date: 6/28/2023
email: garrett.green@exxonmobil.com
Telephone: 575-200-0729

OCD Only

Received by: Shelly Wells
Date: 6/30/2023

Location:	Big Eddy Unit 70	
Spill Date:	6/23/2023	

Area 1		
Approximate Area =	267.03	cu.ft.
VOLUME OF LEAK		
Total Crude Oil =	47.56	bbls
Total Produced Water =	0.00	bbls

Area 2		
Approximate Area =	140.00	sq. ft.
Average Saturation (or depth) of spill =	2.00	inches

Average Porosity Factor =	0.03	

VOLUME OF LEAK		
Total Crude Oil =	0.12	bbls
Total Produced Water =	0.00	bbls

TOTAL VOLUME OF LEAK		
Total Crude Oil =	**47.68**	**bbls**
Total Produced Water =	**0.00**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**47.56**	**bbls**
Total Produced Water =	**0.00**	**bbls**

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

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 234919
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	6/30/2023

Incident ID	NAPP2318139530
District RP	
Facility ID	
Application ID	

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	NAPP2318139530
District RP	
Facility ID	
Application ID	

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: Oct 19 2023

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

OCD Only

Received by: Shelly Wells Date: 10/20/2023

Incident ID	NAPP2318139530
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: Oct 19 2023

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

OCD Only

Received by: Shelly Wells Date: 10/20/2023

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

ENSOLUM

October 19, 2023

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

Re: Deferral Request
Big Eddy Unit 70 Battery
Incident Number NAPP2318139530
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this *Deferral Request* to document assessment, delineation, excavation, and soil sampling activities at the Big Eddy Unit 70 Battery (Site). The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a release of crude oil. Based on field observations and soil sample laboratory analytical results, XTO is submitting this *Deferral Request*, describing Site assessment, delineation, and excavation activities that have occurred and requesting deferral of final remediation for Incident Number NAPP2318139530 until the Site is reconstructed, and/or the well pad is abandoned.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit B, Section 26, Township 21 South, Range 28 East, in Eddy County, New Mexico (32.45634°, -104.05469°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On June 23, 2023, a failed water dump caused water to carry over into the crude oil tanks. The crude oil tanks subsequently overflowed resulting in the release of approximately 47.68 barrels (bbls) of crude oil into the lined containment and onto the surface of the well pad. A vacuum truck was immediately dispatched to the Site and recovered approximately 47.56 bbls of released fluids. XTO immediately notified New Mexico Oil Conservation Division (NMOCD) via email on the same day the release occurred and submitted a Release Notification Form C-141 (Form C-141) on June 28, 2023. The release was assigned Incident Number NAPP2318139530.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 322632104023001, located

approximately 1.2 miles southeast of the Site. The most recent depth to water measurment was 161 feet bgs and the total depth of the well is 241 feet bgs. The Well Record and Log is included in Appendix A. Based on the desktop review, there were two other wells (CP-00633 and CP-00631) that were closer to the Site, but only the well permits were available for review and depth to water data was missing. All wells used for depth to water determination are depicted on Figure 1.

The closest continuously flowing or significant watercourse to the Site is a seasonal dry wash, located approximately 4,052 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area). Potential Site receptors are identified on Figure 1.

Based on the closest depth to groundwater data exceeding a distance of 0.5 miles from the Site, as preferred by the NMOCD, the following Table I Closure Criteria (Closure Criteria) apply:

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

SITE ASSESSMENT ACTIVITIES

On July 7, 2023, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Five delineation soil samples (SS01 through SS05) were collected at a depth 0.5 feet bgs. Delineation soil sample SS01 was collected within the release extent and SS02 through SS05 were collected outside of the release extent to define the edge of the release and to ensure the release did not overflow the lined containment in any other areas. The delineation soil samples were field screened for volatile organic compounds (VOCs) and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was collected and a photographic log is included in Appendix B.

The delineation 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 constituents 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 were collected may not have equilibrated to the 6 degrees Celsius required for shipment and long-term storage but are considered to have been received in acceptable condition by the laboratory.

Laboratory analytical results from delineation soil samples SS01 and SS03 indicated TPH concentrations exceeded the Closure Criteria. On August 11, 2023, a liner integrity inspection was conducted by XTO personnel and upon inspection, the liner was determined to be insufficient. Based on visible staining in the release area, a failed liner inspection, and laboratory analytical results, additional delineation and excavation of impacted soil appeared warranted.

DELINEATION AND EXCAVATION ACTIVITIES

On August 16 and 17, 2023, Ensolum personnel returned to the Site to oversee delineation and excavation activities. Five potholes (PH01 through PH05) were advanced via backhoe to assess the lateral and vertical definition of the release. Potholes PH01 through PH05 were advanced in the vicinity of delineation soil samples SS01 through SS05, respectively. One borehole (BH01) was advanced by use of hand auger at the location of the tear in the liner identified during the liner integrity inspection. Borehole BH01 and all potholes were advanced to depths ranging from 2 feet to 3 feet bgs. Discrete delineation soil samples were collected from each pothole/borehole at depths ranging from 0.5 feet to 3 feet bgs. The delineation soil samples were field screened, handled, and submitted for analysis for the same COCs as described above. Field screening results and observations from the borehole and all potholes were logged on a lithologic/soil sampling log, and are included in Appendix C. All delineation soil sample locations are depicted on Figure 2.

Soil outside the containment was excavated to the maximum extent possible (MEP) with a backhoe in the area represented by delineation soil samples SS01/PH01 and SS03/PH03, both of which contained TPH concentrations exceeding the Site Closure Criteria. Following the removal of impacted soil, 5-point composite confirmation soil samples were collected every 200 square feet from the floor and sidewalls of the excavation. Excavation floor soil samples FS01 and FS02 were collected at depths ranging from 1-foot to 3 feet bgs and excavation sidewall soil samples SW01 and SW02 were collected at depths ranging from ground surface to 3 feet bgs. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thouroughly mixing. Excavation sidewall soil sample SW02 was collected directly adjacent to the lined containment walls. XTO safety policy restricts soil disturbing activities within a 2-foot radius of any on-site active production equipment. Confirmation soil samples were handled and analyzed in the same manner as described above. All floor and sidewall excavation confirmation soil sample locations are depicted on Figure 3.

LABORATORY ANALYTICAL RESULTS AND ADDITIONAL EXCAVATION ACTIVITIES

Laboratory analytical results for excavation floor sample FS01 indicated all COC concentrations were compliant with the Site Closure Criteria. Floor sample FS02 and sidewall sample SW01 contained TPH concentrations exceeding 100 mg/kg. The southern half of the excavation was deepened to 3 feet bgs, and the excavation was laterally extended to the west and south. Subsequent confirmation samples FS02B and SW03 were collected on September 11, 2023 according to the same methods described above. Floor sample FS02A did not meet closure criteria and FS02B was collected of the same material on September 28, 2023. All COC concentrations were compliant with the Site Closure Criteria in the final confirmation samples. The laboratory analytical results are summarized in Table 1, and the complete laboratory analytical reports are included in Appendix D.

The final excavation extent measured approximately 175 square feet. A total of approximately 24 cubic yards of impacted soil was removed during excavation activities and was properly disposed of at the R360 Landfill Facility in Hobbs, New Mexico.

DEFFERAL REQUEST

Due to presence of active production equipment within the lined containment, the remaining impacted soil identified in sidewall soil sample SW02 and borehole soil sample BH01 collected directly beneath the liner at 0.5 feet bgs were not removed. XTO is requesting deferral of final remediation of any impacted soil under the active tank battery. The estimated area of remaining impacted soil measures an area of 813 square feet, and a total of approximately 90 cubic yards of impacted soil remains in place,

assuming a depth of 3 feet bgs based on laboratory analytical results from delineation soil samples. The impacted soil is limited to the area immediately beneath the lined containment and active production equipment, where remediation would require a major facility deconstruction. The release extent has been vertically delineated by soil samples BH01A collected at 3 feet bgs. The release extent has been laterally delineated by delineation soil samples north and east of the containment and by excavation confirmation samples in the remediated area. The proposed deferral area and all delineation and excavation soil samples used to define the deferral area are depicted on Figure 4.

XTO does not believe deferment will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater was determined to be greater than 100 feet bgs, nearly all of the release was contained laterally by the lined containment, and the impacted soil remaining in place is limited to the area immediately beneath the liner. The liner has been repaired by XTO and will restrict future vertical migration of residual impacts.

Based on the presence of active production equipment within the release area and the complete lateral and vertical delineation of impacted soil remaining in place, XTO requests deferral of final remediation for Incident Number NAPP2318139530 until final reclamation of the well pad or major construction, whichever comes first.

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely,
Ensolum, LLC

Benjamin J. Belill
Project Geologist

Ashley L. Ager, MS, PG
Principal

cc: Garrett Green, XTO
Tommee Lambert, XTO
BLM

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Figure 4	Deferral Area Map
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Lithologic / Soil Sampling Logs
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Sample Notifications

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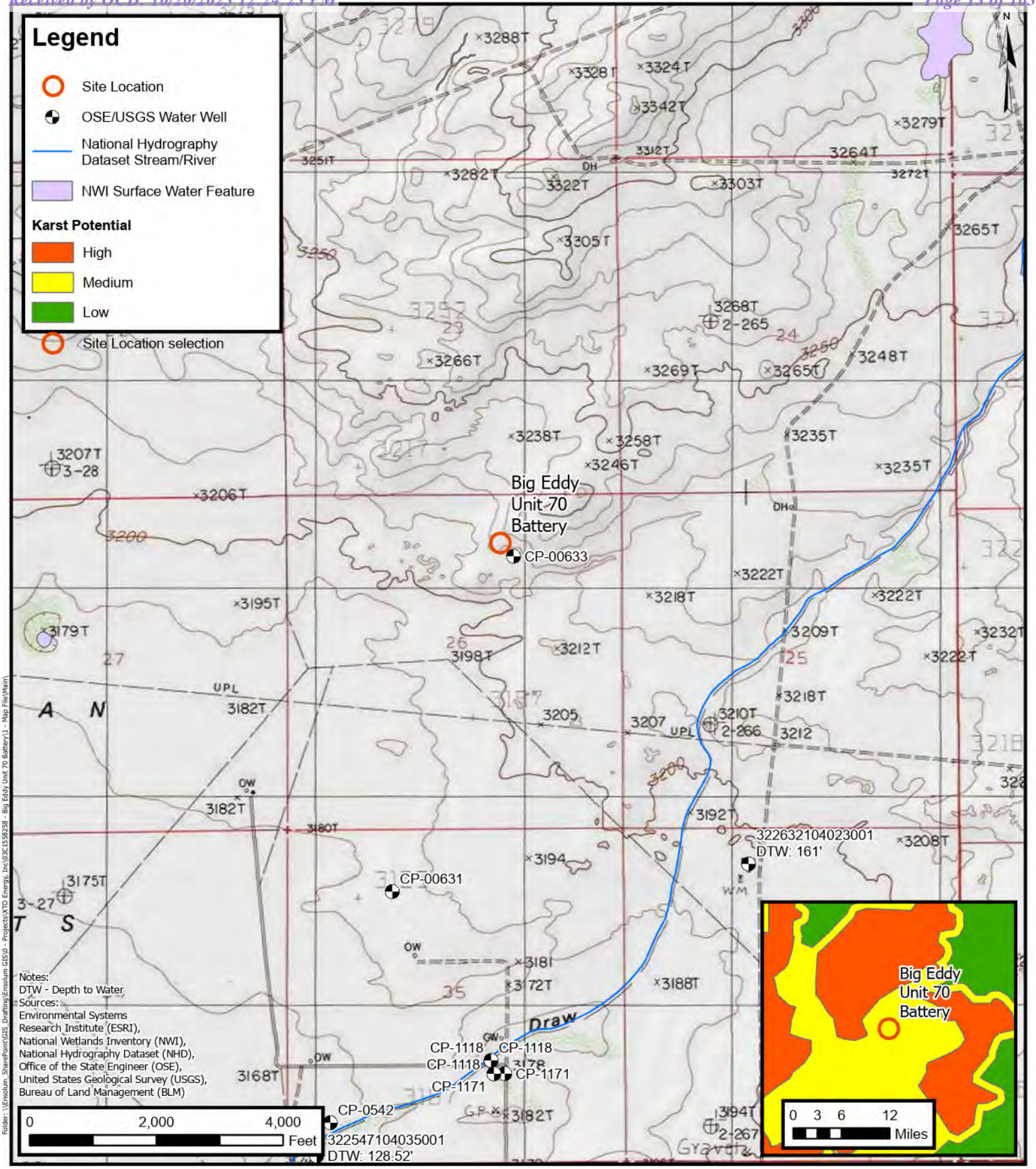
FIGURES

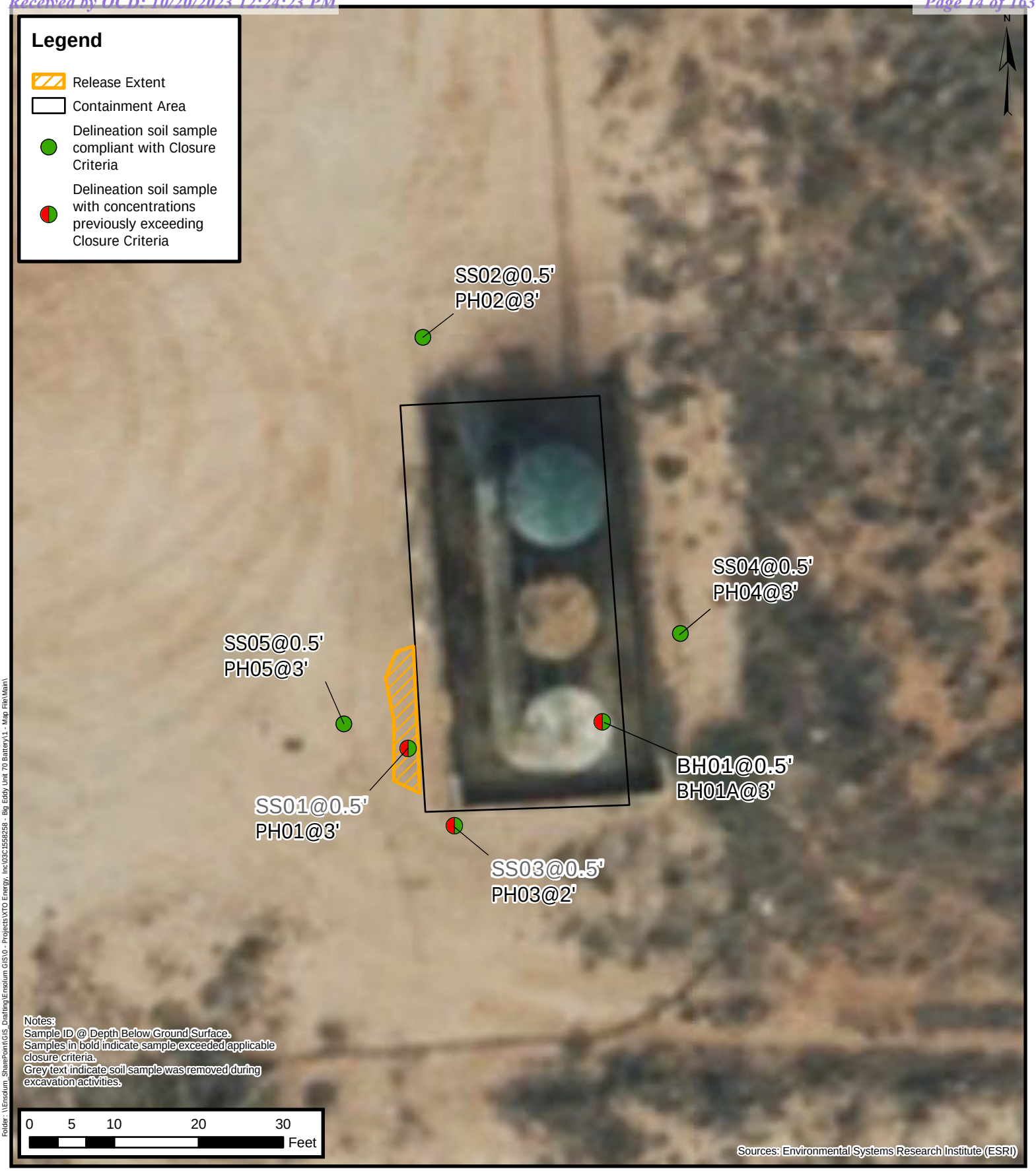


ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
Big Eddy Unit 70 Battery
Incident Number: NAPP2318139530
Unit B Sec 26 T21S R28E
Eddy Co, New Mexico, United States

FIGURE 1



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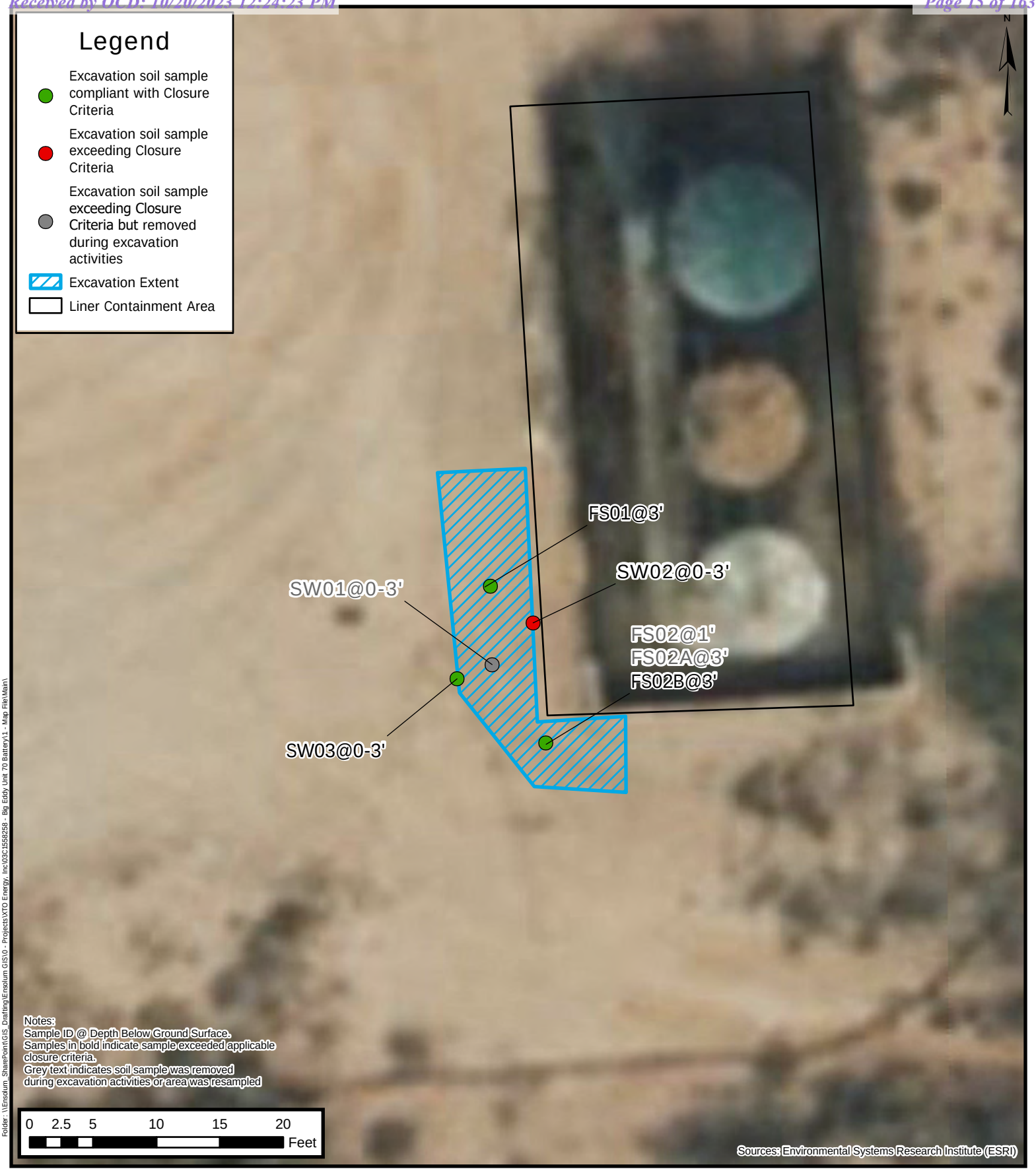
Delineation Soil Sample Locations

XTO Energy, Inc
Big Eddy Unit 70 Battery
Incident Number: NAPP2318139530
Unit B Sec 26 T21S R28E
Eddy Co, New Mexico, United States

FIGURE 2



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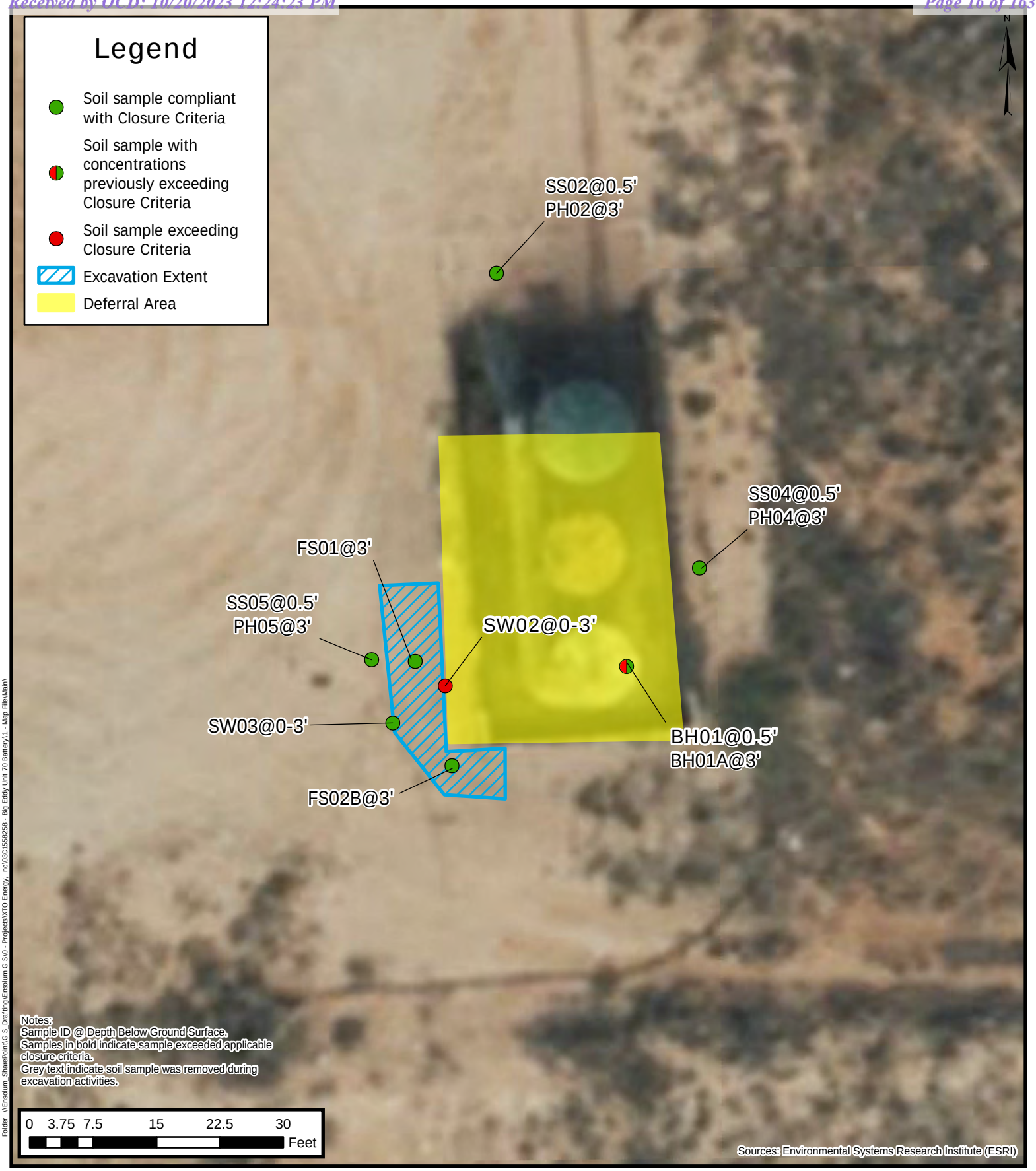
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO Energy, Inc
Big Eddy Unit 70 Battery
Incident Number: NAPP2318139530
Unit B Sec 26 T21S R28E
Eddy Co, New Mexico, United States

FIGURE 3



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ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Deferral Area Map

XTO Energy, Inc
Big Eddy Unit 70 Battery
Incident Number: NAPP2318139530
Unit B Sec 26 T21S R28E
Eddy Co, New Mexico, United States

FIGURE 4

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Big Eddy Unit 70 Battery
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										
~~SS01~~	~~07/07/2023~~	~~0.5~~	~~1.81~~	~~**155**~~	~~3,680~~	~~35,000~~	~~<252~~	~~38,700~~	~~**38,700**~~	~~354~~
PH01	08/16/2023	3	<0.00201	<0.00402	<49.9	54.1	<49.9	54.1	54.1	75.1
SS02	07/07/2023	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	91.0
PH02	08/16/2023	3	<0.00198	<0.00397	<50.5	<50.5	<50.5	<50.5	<50.5	161
~~SS03~~	~~07/07/2023~~	~~0.5~~	~~<0.00200~~	~~<0.00399~~	~~<50.4~~	~~4,420~~	~~<50.4~~	~~4,420~~	~~**4,420**~~	~~23.9~~
~~PH03~~	~~08/16/2023~~	~~2~~	~~<0.00201~~	~~<0.00402~~	~~<50.3~~	~~67.4~~	~~<50.3~~	~~67.4~~	~~67.4~~	~~45.7~~
SS04	07/07/2023	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	41.5
PH04	08/16/2023	3	<0.00199	<0.00398	<50.2	<50.2	<50.2	<50.2	<50.2	174
SS05	07/07/2023	0.5	<0.00198	<0.00397	<50.2	<50.2	<50.2	<50.2	<50.2	32.9
PH05	08/16/2023	3	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	118
BH01	08/16/2023	0.5	<0.00200	0.109	<49.9	1,480	<49.9	1,480	**1,480**	53.3
BH01A	08/16/2023	3	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	89.4
Confirmation Soil Samples										
FS01	08/17/2023	3	<0.00200	<0.00399	<50.1	50.8	<50.1	50.8	50.8	138
~~FS02~~	~~08/17/2023~~	~~1~~	~~<0.00199~~	~~<0.00398~~	~~<49.8~~	~~716~~	~~<49.8~~	~~716~~	~~**716**~~	~~66.2~~
~~FS02A~~	~~09/11/2023~~	~~3~~	~~<0.00199~~	~~0.0464~~	~~158~~	~~<49.6~~	~~<49.6~~	~~158~~	~~**158**~~	~~117~~
FS02B	09/28/2023	3	<0.00199	<0.00398	<50.5	94.6	<50.5	94.6	94.6	116
~~SW01~~	~~08/17/2023~~	~~0 - 3~~	~~<0.00200~~	~~<0.00400~~	~~<49.9~~	~~1,740~~	~~<49.9~~	~~1,740~~	~~**1,740**~~	~~56.1~~
SW02	08/17/2023	0 - 3	<0.00202	0.365	214	1,770	<50.4	1,980	**1,980**	186
SW03	09/11/2023	0 - 3	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	50.6

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

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 or sample location was resampled.

ENSOLUM

APPENDIX A

Referenced Well Records

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click to hideNews Bulletins

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

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 322632104023001

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 322632104023001 21S.28E.36.12321

Eddy County, New Mexico
Latitude 32°26'32", Longitude 104°02'30" NAD27
Land-surface elevation 3,200 feet above NAVD88
The depth of the well is 241 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1976-12-07		D	62610		3037.77	NGVD29	1	Z		
1976-12-07		D	62611		3039.37	NAVD88	1	Z		
1976-12-07		D	72019	160.63			1	Z		
1978-01-05		D	62610		3037.64	NGVD29	1	Z		
1978-01-05		D	62611		3039.24	NAVD88	1	Z		
1978-01-05		D	72019	160.76			1	Z		
1983-01-20		D	62610		3037.60	NGVD29	1	Z		
1983-01-20		D	62611		3039.20	NAVD88	1	Z		
1983-01-20		D	72019	160.80			1	Z		
1987-10-15		D	62610		3037.33	NGVD29	1	Z		
1987-10-15		D	62611		3038.93	NAVD88	1	Z		
1987-10-15		D	72019	161.07			1	Z		
1992-12-10		D	62610		3037.62	NGVD29	P	S		
1992-12-10		D	62611		3039.22	NAVD88	P	S		
1992-12-10		D	72019	160.78			P	S		
1998-01-27		D	62610		3037.29	NGVD29	1	S		

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1998-01-27		D	62611		3038.89	NAVD88	1		S	
1998-01-27		D	72019	161.11			1		S	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Status	P	Pumping
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc
Big Eddy Unit 70 Battery
Incident Number NAPP2318139530

Photograph 1 Date: 7/7/2023
Description: Site assessment activities, release extent.
View: Northwest

Photograph 2 Date: 8/17/2023
Description: Site conditions behind tank battery area.
View: South

Photograph 3 Date: 9/11/2023
Description: Final excavation extent.
View: Northwest

Photograph 4 Date: 9/11/2023
Description: Final excavation extent.
View: Southeast

ENSOLUM

Photographic Log
XTO Energy, Inc
Big Eddy Unit 70 Battery
Incident Number NAPP2318139530

Photograph 5 Date: 8/11/2023

Description: Liner inspection activities, liner breach

View: North

Photograph 6 Date: 9/15/2023

Description: Liner patch following delineation activities.

View: East

ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: BH01	Date: 8/16/2023
	Site Name: Big Eddy Unit 70 Battery	
	Incident Number: NAPP2318139530	
	Job Number: 03C1558258	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: M. O'Dell	Method: Hand Auger
Coordinates: 32.456347, -104.054634	Hole Diameter: 4"	Total Depth: 3'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	<156.8	115.6	N	BH01	0.5		SP	Sand. Reddish brown, very fine to fine grained, poorly graded, dry.
D	<156.8	3.9	N		1	1		
D	<156.8	0	N		2	2		
D	<156.8	0	N	BH01A	3	3		

Total Depth at 3' bgs.

ENSOLUM

	Sample Name: PH01	Date: 8/16/2023
	Site Name: Big Eddy Unit 70 Battery	
	Incident Number: NAPP2318139530	
	Job Number: 03C1558258	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: M. O'Dell	Method: Backhoe
Coordinates: 32.456339, -104.054712	Hole Diameter: N/A	Total Depth: 3'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	448	1,781	Y	SS01	0.5	0	CCHE	CALICHE, moist, brown-light brown, some fine grain sand, strong H/C odor, fill.
D	<156.8	198.4	N		1	1	SP	Sand. Reddish brown, very fine to fine grained, poorly graded, dry.
D	<156.8	41.1	N		2	2		
D	<156.8	1.3	N	PH01	3	3		

Total Depth of 3' bgs.

ENSOLUM

	Sample Name: PH02	Date: 8/16/2023
	Site Name: Big Eddy Unit 70 Battery	
	Incident Number: NAPP2318139530	
	Job Number: 03C1558258	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: M. O'Dell	Method: Backhoe
Coordinates: 32.456472, -104.054705	Hole Diameter: N/A	Total Depth: 3'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	<168	0	N	SS02	0.5	0	CCHE	CALICHE, moist, brown-light brown, some fine grain sand, no stain, no odor, fill.
D	<173.6	0	N		1	1	SW	Sand. Brown, trace red, very fine to fine grained, well graded, dry.
D	<173.6	0	N		2	2		
D	<173.6	0	N	PH02	3	3		

Total Depth at 3' bgs.

ENSOLUM

	Sample Name: PH03	Date: 8/16/2023
	Site Name: Big Eddy Unit 70 Battery	
	Incident Number: NAPP2318139530	
	Job Number: 03C1558258	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: M. O'Dell	Method: Backhoe
Coordinates: 32.456314, -104.054695	Hole Diameter: N/A	Total Depth: 2'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	<168	0	N	SS03	0.5	0	CCHE	CALICHE, moist, brown-light brown, some fine grain sand, no stain, no odor, fill.
D	<173.6	0	N		1	1	SP	Sand. Reddish brown, very fine to fine grained, poorly sorted, dry.
D	<173.6	0	N	PH03	2	2		

Total Depth at 2' bgs.

ENSOLUM

	Sample Name: PH04	Date: 8/16/2023
	Site Name: Big Eddy Unit 70 Battery	
	Incident Number: NAPP2318139530	
	Job Number: 03C1558258	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: M. O'Dell	Method: Backhoe
Coordinates: 32.456377, -104.054605	Hole Diameter: N/A	Total Depth: 3'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	<168	0	N	SS04	0.5	0	CCHE	CALICHE, moist, brown-light brown, some fine grain sand, no stain, no odor, fill.
D	<173.6	0	N		1	1	SP	Sand. Reddish brown, very fine to fine grained, poorly sorted, dry.
D	257.6	1,5	N		2	2		
D	<173.6	0.5	N	PH04	3	3		

Total Depth at 3' bgs.

ENSOLUM

	Sample Name: PH05	Date: 8/16/2023
	Site Name: Big Eddy Unit 70 Battery	
	Incident Number: NAPP2318139530	
	Job Number: 03C1558258	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: M. O'Dell	Method: Backhoe
Coordinates: 32.456347, -104.054736	Hole Diameter: N/A	Total Depth: 3'

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. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	<168	0	N	SS05	0.5	0	CCHE	CALICHE, moist, brown-light brown, some fine grain sand, no stain, no odor, fill.
D	<173.6	0	N		1	1	SP	Sand. Reddish brown, trace CCHE, very fine to fine grained, poorly graded, dry.
D	<173.6	0	N		2	2		
D	<173.6	0	N	PH05	3	3		

Total Depth at 3' bgs.

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 7/25/2023 11:10:26 AM

JOB DESCRIPTION

Big Eddy Unit 70 Battery
SDG NUMBER 03C1558258

JOB NUMBER

890-4930-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization

Generated
7/25/2023 11:10:26 AM

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

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Laboratory Job ID: 890-4930-1
SDG: 03C1558258

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Definitions/Glossary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

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, low biased.
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.
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: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

Job ID: 890-4930-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4930-1

Receipt
The samples were received on 7/12/2023 8:35 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 2.6°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-4930-1), SS02 (890-4930-2), SS03 (890-4930-3), SS04 (890-4930-4) and SS05 (890-4930-5).

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-57701 recovered above the upper control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-57701/64).

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-57701 recovered above the upper control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCV 880-57701/82) and (CCV 880-57701/95).

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-57703 and analytical batch 880-57701 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-57701 recovered above the upper control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-57701/113).

Method 8021B: Surrogate recovery for the following samples were outside control limits: SS02 (890-4930-2), SS03 (890-4930-3), SS04 (890-4930-4), SS05 (890-4930-5), (LCS 880-57703/1-A), (LCSD 880-57703/2-A), (MB 880-57655/5-A), (890-4929-A-4-D), (890-4929-A-4-B MS) and (890-4929-A-4-C MSD). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS01 (890-4930-1). 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: Surrogate recovery for the following samples were outside control limits: (CCV 880-58306/20), (CCV 880-58306/31) and (CCV 880-58306/5). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS01 (890-4930-1), (890-4921-A-1-H MS) and (890-4921-A-1-I MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-57822 and analytical batch 880-58306 was outside the upper control limits.

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

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

Case Narrative

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

Job ID: 890-4930-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

Client Sample ID: SS01

Date Collected: 07/07/23 14:55
Date Received: 07/12/23 08:35
Sample Depth: 0.5

Lab Sample ID: 890-4930-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.81		0.402		mg/Kg		07/17/23 13:55	07/20/23 14:48	200
Toluene	33.4		0.402		mg/Kg		07/17/23 13:55	07/20/23 14:48	200
Ethylbenzene	5.69		0.402		mg/Kg		07/17/23 13:55	07/20/23 14:48	200
m-Xylene & p-Xylene	91.4		0.805		mg/Kg		07/17/23 13:55	07/20/23 14:48	200
o-Xylene	22.8		0.402		mg/Kg		07/17/23 13:55	07/20/23 14:48	200
Xylenes, Total	114		0.805		mg/Kg		07/17/23 13:55	07/20/23 14:48	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*	*07/17/23 13:55*	*07/20/23 14:48*	*200*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*07/17/23 13:55*	*07/20/23 14:48*	*200*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	155		0.805		mg/Kg			07/21/23 08:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	38700		252		mg/Kg			07/25/23 11:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	3680		252		mg/Kg		07/19/23 10:18	07/24/23 18:39	5
Diesel Range Organics (Over C10-C28)	35000		252		mg/Kg		07/19/23 10:18	07/24/23 18:39	5
OII Range Organics (Over C28-C36)	<252	U	252		mg/Kg		07/19/23 10:18	07/24/23 18:39	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*668*	*S1+*	*70 - 130*	*07/19/23 10:18*	*07/24/23 18:39*	*5*
o-Terphenyl	*375*	*S1+*	*70 - 130*	*07/19/23 10:18*	*07/24/23 18:39*	*5*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	354		5.04		mg/Kg			07/14/23 16:29	1

Client Sample ID: SS02

Date Collected: 07/07/23 15:00
Date Received: 07/12/23 08:35
Sample Depth: 0.5

Lab Sample ID: 890-4930-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:30	07/16/23 12:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:30	07/16/23 12:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:30	07/16/23 12:53	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/14/23 14:30	07/16/23 12:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:30	07/16/23 12:53	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/14/23 14:30	07/16/23 12:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*258*	*S1+*	*70 - 130*	*07/14/23 14:30*	*07/16/23 12:53*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

Client Sample ID: SS02

Date Collected: 07/07/23 15:00
Date Received: 07/12/23 08:35
Sample Depth: 0.5

Lab Sample ID: 890-4930-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*07/14/23 14:30*	*07/16/23 12:53*	*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			07/17/23 14:47	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			07/25/23 11:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/19/23 10:18	07/24/23 19:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/19/23 10:18	07/24/23 19:49	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/19/23 10:18	07/24/23 19:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*07/19/23 10:18*	*07/24/23 19:49*	*1*
o-Terphenyl	*94*		*70 - 130*	*07/19/23 10:18*	*07/24/23 19:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**91.0**		4.97		mg/Kg			07/14/23 16:44	1

Client Sample ID: SS03

Date Collected: 07/07/23 15:05
Date Received: 07/12/23 08:35
Sample Depth: 0.5

Lab Sample ID: 890-4930-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:30	07/16/23 13:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:30	07/16/23 13:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:30	07/16/23 13:19	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/14/23 14:30	07/16/23 13:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:30	07/16/23 13:19	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/14/23 14:30	07/16/23 13:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*196*	*S1+*	*70 - 130*	*07/14/23 14:30*	*07/16/23 13:19*	*1*
1,4-Difluorobenzene (Surr)	*61*	*S1-*	*70 - 130*	*07/14/23 14:30*	*07/16/23 13:19*	*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			07/17/23 14:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**4420**		50.4		mg/Kg			07/25/23 11:35	1

Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

Client Sample ID: SS03

Lab Sample ID: 890-4930-3
Matrix: Solid
Date Collected: 07/07/23 15:05
Date Received: 07/12/23 08:35
Sample Depth: 0.5

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	<50.4	U	50.4		mg/Kg		07/19/23 10:18	07/24/23 19:06	1
Diesel Range Organics (Over C10-C28)	**4420**		50.4		mg/Kg		07/19/23 10:18	07/24/23 19:06	1
Oll Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/19/23 10:18	07/24/23 19:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*07/19/23 10:18*	*07/24/23 19:06*	*1*
o-Terphenyl	*85*		*70 - 130*	*07/19/23 10:18*	*07/24/23 19:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23.9**		4.98		mg/Kg			07/14/23 16:49	1

Client Sample ID: SS04

Lab Sample ID: 890-4930-4
Matrix: Solid
Date Collected: 07/07/23 15:10
Date Received: 07/12/23 08:35
Sample Depth: 0.5

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		07/14/23 14:30	07/16/23 13:45	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/14/23 14:30	07/16/23 13:45	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/14/23 14:30	07/16/23 13:45	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/14/23 14:30	07/16/23 13:45	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/14/23 14:30	07/16/23 13:45	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/14/23 14:30	07/16/23 13:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*240*	*S1+*	*70 - 130*	*07/14/23 14:30*	*07/16/23 13:45*	*1*
1,4-Difluorobenzene (Surr)	*58*	*S1-*	*70 - 130*	*07/14/23 14:30*	*07/16/23 13:45*	*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			07/17/23 14:47	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			07/25/23 11:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/19/23 10:18	07/24/23 20:11	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/19/23 10:18	07/24/23 20:11	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/19/23 10:18	07/24/23 20:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*07/19/23 10:18*	*07/24/23 20:11*	*1*
o-Terphenyl	*96*		*70 - 130*	*07/19/23 10:18*	*07/24/23 20:11*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

Client Sample ID: SS04

Lab Sample ID: 890-4930-4
Matrix: Solid
Date Collected: 07/07/23 15:10
Date Received: 07/12/23 08:35
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	41.5		5.01		mg/Kg			07/14/23 16:54	1

Client Sample ID: SS05

Lab Sample ID: 890-4930-5
Matrix: Solid
Date Collected: 07/07/23 15:15
Date Received: 07/12/23 08:35
Sample Depth: 0.5

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		07/14/23 14:30	07/16/23 14:10	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/14/23 14:30	07/16/23 14:10	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/14/23 14:30	07/16/23 14:10	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		07/14/23 14:30	07/16/23 14:10	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/14/23 14:30	07/16/23 14:10	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		07/14/23 14:30	07/16/23 14:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*261*	*S1+*	*70 - 130*	*07/14/23 14:30*	*07/16/23 14:10*	*1*
1,4-Difluorobenzene (Surr)	*120*		*70 - 130*	*07/14/23 14:30*	*07/16/23 14:10*	*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			07/17/23 14:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			07/25/23 11:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		07/19/23 10:18	07/24/23 19:28	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		07/19/23 10:18	07/24/23 19:28	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		07/19/23 10:18	07/24/23 19:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*07/19/23 10:18*	*07/24/23 19:28*	*1*
o-Terphenyl	*88*		*70 - 130*	*07/19/23 10:18*	*07/24/23 19:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32.9		4.99		mg/Kg			07/14/23 16:58	1

Surrogate Summary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

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)
880-30743-A-1-D MS	Matrix Spike	104	105
880-30743-A-1-E MSD	Matrix Spike Duplicate	112	104
890-4929-A-4-B MS	Matrix Spike	272 S1+	76
890-4929-A-4-C MSD	Matrix Spike Duplicate	218 S1+	70
890-4930-1	SS01	141 S1+	105
890-4930-2	SS02	258 S1+	91
890-4930-3	SS03	196 S1+	61 S1-
890-4930-4	SS04	240 S1+	58 S1-
890-4930-5	SS05	261 S1+	120
LCS 880-57703/1-A	Lab Control Sample	213 S1+	85
LCS 880-57844/1-A	Lab Control Sample	95	100
LCSD 880-57703/2-A	Lab Control Sample Dup	223 S1+	63 S1-
LCSD 880-57844/2-A	Lab Control Sample Dup	89	103
MB 880-57655/5-A	Method Blank	115	60 S1-
MB 880-57703/5-A	Method Blank	122	81
MB 880-57844/5-A	Method Blank	83	95

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)
890-4921-A-1-H MS	Matrix Spike	13 S1-	10 S1-
890-4921-A-1-I MSD	Matrix Spike Duplicate	13 S1-	10 S1-
890-4930-1	SS01	668 S1+	375 S1+
890-4930-2	SS02	109	94
890-4930-3	SS03	111	85
890-4930-4	SS04	113	96
890-4930-5	SS05	104	88
LCS 880-57822/2-A	Lab Control Sample	96	87
LCSD 880-57822/3-A	Lab Control Sample Dup	94	84
MB 880-57822/1-A	Method Blank	134 S1+	123

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-57655/5-A
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57655

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/15/23 21:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/15/23 21:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/15/23 21:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/14/23 08:26	07/15/23 21:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/15/23 21:24	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/14/23 08:26	07/15/23 21:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*07/14/23 08:26*	*07/15/23 21:24*	*1*
1,4-Difluorobenzene (Surr)	*60*	*S1-*	*70 - 130*	*07/14/23 08:26*	*07/15/23 21:24*	*1*

Lab Sample ID: MB 880-57703/5-A
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57703

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:30	07/16/23 10:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:30	07/16/23 10:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:30	07/16/23 10:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/14/23 14:30	07/16/23 10:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:30	07/16/23 10:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/14/23 14:30	07/16/23 10:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*07/14/23 14:30*	*07/16/23 10:45*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*07/14/23 14:30*	*07/16/23 10:45*	*1*

Lab Sample ID: LCS 880-57703/1-A
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57703

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1186		mg/Kg		119	70 - 130		
Toluene			0.100	0.1144		mg/Kg		114	70 - 130		
Ethylbenzene			0.100	0.1137		mg/Kg		114	70 - 130		
m-Xylene & p-Xylene			0.200	0.2109		mg/Kg		105	70 - 130		
o-Xylene			0.100	0.1174		mg/Kg		117	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*213*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*

Lab Sample ID: LCSD 880-57703/2-A
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57703

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1148		mg/Kg		115	70 - 130	3	35

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

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

Lab Sample ID: LCSD 880-57703/2-A
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57703

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1217		mg/Kg		122	70 - 130	6	35
Ethylbenzene			0.100	0.1291		mg/Kg		129	70 - 130	13	35
m-Xylene & p-Xylene			0.200	0.2349		mg/Kg		117	70 - 130	11	35
o-Xylene			0.100	0.1225		mg/Kg		123	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*223*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*63*	*S1-*	*70 - 130*

Lab Sample ID: 890-4929-A-4-B MS
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57703

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.0994	0.1077		mg/Kg		108	70 - 130
Toluene	<0.00202	U F2 F1	0.0994	0.07130		mg/Kg		72	70 - 130
Ethylbenzene	<0.00202	U F2 F1	0.0994	0.04676	F1	mg/Kg		47	70 - 130
m-Xylene & p-Xylene	<0.00404	U F2 F1	0.199	0.08711	F1	mg/Kg		44	70 - 130
o-Xylene	<0.00202	U F1	0.0994	0.06021	F1	mg/Kg		61	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*272*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*

Lab Sample ID: 890-4929-A-4-C MSD
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 57703

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0998	0.07531		mg/Kg		75	70 - 130	35	35
Toluene	<0.00202	U F2 F1	0.0998	0.04510	F2 F1	mg/Kg		45	70 - 130	45	35
Ethylbenzene	<0.00202	U F2 F1	0.0998	0.03174	F2 F1	mg/Kg		32	70 - 130	38	35
m-Xylene & p-Xylene	<0.00404	U F2 F1	0.200	0.05493	F2 F1	mg/Kg		28	70 - 130	45	35
o-Xylene	<0.00202	U F1	0.0998	0.04349	F1	mg/Kg		44	70 - 130	32	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*218*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*

Lab Sample ID: MB 880-57844/5-A
Matrix: Solid
Analysis Batch: 58089

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57844

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:55	07/20/23 11:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:55	07/20/23 11:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:55	07/20/23 11:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/17/23 13:55	07/20/23 11:20	1

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

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

Lab Sample ID: MB 880-57844/5-A
Matrix: Solid
Analysis Batch: 58089

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57844

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:55	07/20/23 11:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/17/23 13:55	07/20/23 11:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*07/17/23 13:55*	*07/20/23 11:20*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*07/17/23 13:55*	*07/20/23 11:20*	*1*

Lab Sample ID: LCS 880-57844/1-A
Matrix: Solid
Analysis Batch: 58089

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57844

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1031		mg/Kg		103	70 - 130		
Toluene			0.100	0.1080		mg/Kg		108	70 - 130		
Ethylbenzene			0.100	0.09914		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.1936		mg/Kg		97	70 - 130		
o-Xylene			0.100	0.09607		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-57844/2-A
Matrix: Solid
Analysis Batch: 58089

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57844

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1039		mg/Kg		104	70 - 130	1	35
Toluene			0.100	0.1047		mg/Kg		105	70 - 130	3	35
Ethylbenzene			0.100	0.09470		mg/Kg		95	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1830		mg/Kg		91	70 - 130	6	35
o-Xylene			0.100	0.09070		mg/Kg		91	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 880-30743-A-1-D MS
Matrix: Solid
Analysis Batch: 58089

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57844

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.0998	0.1036		mg/Kg		104	70 - 130		
Toluene	<0.00202	U	0.0998	0.1039		mg/Kg		104	70 - 130		
Ethylbenzene	<0.00202	U	0.0998	0.09181		mg/Kg		92	70 - 130		
m-Xylene & p-Xylene	<0.00403	U	0.200	0.1782		mg/Kg		89	70 - 130		
o-Xylene	<0.00202	U	0.0998	0.09006		mg/Kg		90	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

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

Lab Sample ID: 880-30743-A-1-D MS
Matrix: Solid
Analysis Batch: 58089

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57844

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 880-30743-A-1-E MSD
Matrix: Solid
Analysis Batch: 58089

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 57844

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0996	0.09653		mg/Kg		97	70 - 130	7	35
Toluene	<0.00202	U	0.0996	0.1066		mg/Kg		107	70 - 130	3	35
Ethylbenzene	<0.00202	U	0.0996	0.09743		mg/Kg		98	70 - 130	6	35
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1934		mg/Kg		97	70 - 130	8	35
o-Xylene	<0.00202	U	0.0996	0.09744		mg/Kg		97	70 - 130	8	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

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

Lab Sample ID: MB 880-57822/1-A
Matrix: Solid
Analysis Batch: 58306

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57822

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		07/17/23 10:30	07/24/23 08:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/17/23 10:30	07/24/23 08:51	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/17/23 10:30	07/24/23 08:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*134*	*S1+*	*70 - 130*	*07/17/23 10:30*	*07/24/23 08:51*	*1*
o-Terphenyl	*123*		*70 - 130*	*07/17/23 10:30*	*07/24/23 08:51*	*1*

Lab Sample ID: LCS 880-57822/2-A
Matrix: Solid
Analysis Batch: 58306

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57822

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	935.9		mg/Kg		94	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	888.1		mg/Kg		89	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*87*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

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

Lab Sample ID: LCSD 880-57822/3-A
Matrix: Solid
Analysis Batch: 58306

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57822

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	924.4		mg/Kg		92	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	881.3		mg/Kg		88	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*94*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: 890-4921-A-1-H MS
Matrix: Solid
Analysis Batch: 58306

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57822

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	990	1075		mg/Kg		109	70 - 130
Diesel Range Organics (Over C10-C28)	<50.2	U	990	999.7		mg/Kg		99	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*13*	*S1-*	*70 - 130*
o-Terphenyl	*10*	*S1-*	*70 - 130*

Lab Sample ID: 890-4921-A-1-I MSD
Matrix: Solid
Analysis Batch: 58306

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 57822

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	<50.2	U	990	1080		mg/Kg		109	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.2	U	990	1028		mg/Kg		102	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*13*	*S1-*	*70 - 130*
o-Terphenyl	*10*	*S1-*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-57588/1-A
Matrix: Solid
Analysis Batch: 57721

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			07/14/23 16:14	1

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-57588/2-A
Matrix: Solid
Analysis Batch: 57721

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	249.7		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-57588/3-A
Matrix: Solid
Analysis Batch: 57721

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	250.0		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 890-4930-1 MS
Matrix: Solid
Analysis Batch: 57721

Client Sample ID: SS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	354		252	594.7		mg/Kg		95	90 - 110		

Lab Sample ID: 890-4930-1 MSD
Matrix: Solid
Analysis Batch: 57721

Client Sample ID: SS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	354		252	595.1		mg/Kg		96	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

GC VOA

Prep Batch: 57655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-57655/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 57701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4930-2	SS02	Total/NA	Solid	8021B	57703
890-4930-3	SS03	Total/NA	Solid	8021B	57703
890-4930-4	SS04	Total/NA	Solid	8021B	57703
890-4930-5	SS05	Total/NA	Solid	8021B	57703
MB 880-57655/5-A	Method Blank	Total/NA	Solid	8021B	57655
MB 880-57703/5-A	Method Blank	Total/NA	Solid	8021B	57703
LCS 880-57703/1-A	Lab Control Sample	Total/NA	Solid	8021B	57703
LCSD 880-57703/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	57703
890-4929-A-4-B MS	Matrix Spike	Total/NA	Solid	8021B	57703
890-4929-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	57703

Prep Batch: 57703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4930-2	SS02	Total/NA	Solid	5035	
890-4930-3	SS03	Total/NA	Solid	5035	
890-4930-4	SS04	Total/NA	Solid	5035	
890-4930-5	SS05	Total/NA	Solid	5035	
MB 880-57703/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-57703/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-57703/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4929-A-4-B MS	Matrix Spike	Total/NA	Solid	5035	
890-4929-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 57844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4930-1	SS01	Total/NA	Solid	5035	
MB 880-57844/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-57844/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-57844/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-30743-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-30743-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 57867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4930-1	SS01	Total/NA	Solid	Total BTEX	
890-4930-2	SS02	Total/NA	Solid	Total BTEX	
890-4930-3	SS03	Total/NA	Solid	Total BTEX	
890-4930-4	SS04	Total/NA	Solid	Total BTEX	
890-4930-5	SS05	Total/NA	Solid	Total BTEX	

Analysis Batch: 58089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4930-1	SS01	Total/NA	Solid	8021B	57844
MB 880-57844/5-A	Method Blank	Total/NA	Solid	8021B	57844
LCS 880-57844/1-A	Lab Control Sample	Total/NA	Solid	8021B	57844
LCSD 880-57844/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	57844
880-30743-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	57844

QC Association Summary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

GC VOA (Continued)

Analysis Batch: 58089 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-30743-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	57844

GC Semi VOA

Prep Batch: 57822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4930-1	SS01	Total/NA	Solid	8015NM Prep	
890-4930-2	SS02	Total/NA	Solid	8015NM Prep	
890-4930-3	SS03	Total/NA	Solid	8015NM Prep	
890-4930-4	SS04	Total/NA	Solid	8015NM Prep	
890-4930-5	SS05	Total/NA	Solid	8015NM Prep	
MB 880-57822/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-57822/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-57822/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4921-A-1-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4921-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 58306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4930-1	SS01	Total/NA	Solid	8015B NM	57822
890-4930-2	SS02	Total/NA	Solid	8015B NM	57822
890-4930-3	SS03	Total/NA	Solid	8015B NM	57822
890-4930-4	SS04	Total/NA	Solid	8015B NM	57822
890-4930-5	SS05	Total/NA	Solid	8015B NM	57822
MB 880-57822/1-A	Method Blank	Total/NA	Solid	8015B NM	57822
LCS 880-57822/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	57822
LCSD 880-57822/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	57822
890-4921-A-1-H MS	Matrix Spike	Total/NA	Solid	8015B NM	57822
890-4921-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	57822

Analysis Batch: 58474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4930-1	SS01	Total/NA	Solid	8015 NM	
890-4930-2	SS02	Total/NA	Solid	8015 NM	
890-4930-3	SS03	Total/NA	Solid	8015 NM	
890-4930-4	SS04	Total/NA	Solid	8015 NM	
890-4930-5	SS05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 57588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4930-1	SS01	Soluble	Solid	DI Leach	
890-4930-2	SS02	Soluble	Solid	DI Leach	
890-4930-3	SS03	Soluble	Solid	DI Leach	
890-4930-4	SS04	Soluble	Solid	DI Leach	
890-4930-5	SS05	Soluble	Solid	DI Leach	
MB 880-57588/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-57588/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-57588/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4930-1 MS	SS01	Soluble	Solid	DI Leach	
890-4930-1 MSD	SS01	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

HPLC/IC

Analysis Batch: 57721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4930-1	SS01	Soluble	Solid	300.0	57588
890-4930-2	SS02	Soluble	Solid	300.0	57588
890-4930-3	SS03	Soluble	Solid	300.0	57588
890-4930-4	SS04	Soluble	Solid	300.0	57588
890-4930-5	SS05	Soluble	Solid	300.0	57588
MB 880-57588/1-A	Method Blank	Soluble	Solid	300.0	57588
LCS 880-57588/2-A	Lab Control Sample	Soluble	Solid	300.0	57588
LCSD 880-57588/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	57588
890-4930-1 MS	SS01	Soluble	Solid	300.0	57588
890-4930-1 MSD	SS01	Soluble	Solid	300.0	57588

Lab Chronicle

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

Client Sample ID: SS01
Date Collected: 07/07/23 14:55
Date Received: 07/12/23 08:35

Lab Sample ID: 890-4930-1
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			4.97 g	5 mL	57844	07/17/23 13:55	EL	EET MID
Total/NA	Analysis	8021B		200	5 mL	5 mL	58089	07/20/23 14:48	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57867	07/21/23 08:26	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58474	07/25/23 11:35	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	57822	07/19/23 10:18	TKC	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	58306	07/24/23 18:39	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	57588	07/13/23 10:51	KS	EET MID
Soluble	Analysis	300.0		1			57721	07/14/23 16:29	CH	EET MID

Client Sample ID: SS02
Date Collected: 07/07/23 15:00
Date Received: 07/12/23 08:35

Lab Sample ID: 890-4930-2
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			4.99 g	5 mL	57703	07/14/23 14:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57701	07/16/23 12:53	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57867	07/17/23 14:47	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58474	07/25/23 11:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	57822	07/19/23 10:18	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58306	07/24/23 19:49	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	57588	07/13/23 10:51	KS	EET MID
Soluble	Analysis	300.0		1			57721	07/14/23 16:44	CH	EET MID

Client Sample ID: SS03
Date Collected: 07/07/23 15:05
Date Received: 07/12/23 08:35

Lab Sample ID: 890-4930-3
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			5.01 g	5 mL	57703	07/14/23 14:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57701	07/16/23 13:19	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57867	07/17/23 14:47	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58474	07/25/23 11:35	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	57822	07/19/23 10:18	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58306	07/24/23 19:06	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	57588	07/13/23 10:51	KS	EET MID
Soluble	Analysis	300.0		1			57721	07/14/23 16:49	CH	EET MID

Client Sample ID: SS04
Date Collected: 07/07/23 15:10
Date Received: 07/12/23 08:35

Lab Sample ID: 890-4930-4
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	57703	07/14/23 14:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57701	07/16/23 13:45	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57867	07/17/23 14:47	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

Client Sample ID: SS04

Date Collected: 07/07/23 15:10
Date Received: 07/12/23 08:35

Lab Sample ID: 890-4930-4
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			58474	07/25/23 11:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	57822	07/19/23 10:18	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58306	07/24/23 20:11	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	57588	07/13/23 10:51	KS	EET MID
Soluble	Analysis	300.0		1			57721	07/14/23 16:54	CH	EET MID

Client Sample ID: SS05

Date Collected: 07/07/23 15:15
Date Received: 07/12/23 08:35

Lab Sample ID: 890-4930-5
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			5.04 g	5 mL	57703	07/14/23 14:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57701	07/16/23 14:10	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57867	07/17/23 14:47	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58474	07/25/23 11:35	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	57822	07/19/23 10:18	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58306	07/24/23 19:28	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	57588	07/13/23 10:51	KS	EET MID
Soluble	Analysis	300.0		1			57721	07/14/23 16:58	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: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

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	T104704400-23-26	06-30-24

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: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

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: Big Eddy Unit 70 Battery

Job ID: 890-4930-1
SDG: 03C1558258

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4930-1	SS01	Solid	07/07/23 14:55	07/12/23 08:35	0.5
890-4930-2	SS02	Solid	07/07/23 15:00	07/12/23 08:35	0.5
890-4930-3	SS03	Solid	07/07/23 15:05	07/12/23 08:35	0.5
890-4930-4	SS04	Solid	07/07/23 15:10	07/12/23 08:35	0.5
890-4930-5	SS05	Solid	07/07/23 15:15	07/12/23 08:35	0.5

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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:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	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:	Big Eddy Unit 70 Battery	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558258	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	NM007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	22.8
Total Containers:		Corrected Temperature:	22.6

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	CHLORIDES (EPA: 3000.0)	TPH (8015)	BTEX (8021)
SS01	S	7/7/23	255	.5	G	1				
SS02	"	"	300	"	"	1				
SS03	"	"	305	"	"	1				
SS04	"	"	310	"	"	1				
SS05	"	"	315	"	"	1				

890-4930 Chain of Custody

Sample Comments

Incident ID:
nAPP2318139530
Cost Center:
1135891001
AFE:

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			4		
3			6		
5					

Revised Date: 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4930-1
SDG Number: 03C1558258

Login Number: 4930
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: 890-4930-1
SDG Number: 03C1558258

Login Number: 4930
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/13/23 11:48 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: Ben Belill
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 8/28/2023 11:13:42 AM

JOB DESCRIPTION

Big Eddy Unit 70 Battery
SDG NUMBER 03C1558258

JOB NUMBER

890-5114-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization

Generated
8/28/2023 11:13:42 AM

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

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Laboratory Job ID: 890-5114-1
SDG: 03C1558258

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Definitions/Glossary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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.

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

Job ID: 890-5114-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5114-1

Receipt
The samples were received on 8/16/2023 4:44 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH01 (890-5114-1), BH01A (890-5114-2), PH01 (890-5114-3), PH03 (890-5114-4), PH04 (890-5114-5), PH02 (890-5114-6) and PH05 (890-5114-7).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: PH01 (890-5114-3), PH04 (890-5114-5), PH02 (890-5114-6) and PH05 (890-5114-7). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample duplicate (LCSD) for preparation batch 880-61151 and analytical batch 880-61057 recovered outside control limits for the following analytes: m-Xylene & p-Xylene and o-Xylene. Since only an acceptable LCS is required per the method, the data has been qualified and reported.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-61151 and analytical batch 880-61057 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.

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-61009 and analytical batch 880-60956 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-60956/31), (CCV 880-60956/47) and (CCV 880-60956/58). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The continuing calibration verification (CCV) associated with batch 880-60956 recovered above the upper control limit for Diesel Range Organics (Over C10-C28). An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-60956/47).

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 880-60585 and analytical batch 880-60731 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: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

Client Sample ID: BH01

Date Collected: 08/16/23 09:35
Date Received: 08/16/23 16:44
Sample Depth: 0.5

Lab Sample ID: 890-5114-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/25/23 15:10	08/25/23 23:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/25/23 15:10	08/25/23 23:47	1
Ethylbenzene	**0.00664**	**F1**	0.00200		mg/Kg		08/25/23 15:10	08/25/23 23:47	1
m-Xylene & p-Xylene	**0.0806**	***+ F1**	0.00399		mg/Kg		08/25/23 15:10	08/25/23 23:47	1
o-Xylene	**0.0222**	***+ F1**	0.00200		mg/Kg		08/25/23 15:10	08/25/23 23:47	1
Xylenes, Total	**0.103**	***+ F1**	0.00399		mg/Kg		08/25/23 15:10	08/25/23 23:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*08/25/23 15:10*	*08/25/23 23:47*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*08/25/23 15:10*	*08/25/23 23:47*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.109**		0.00399		mg/Kg			08/28/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1480**		49.9		mg/Kg			08/25/23 11:26	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		08/24/23 12:53	08/25/23 00:25	1
Diesel Range Organics (Over C10-C28)	**1480**		49.9		mg/Kg		08/24/23 12:53	08/25/23 00:25	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/24/23 12:53	08/25/23 00:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*08/24/23 12:53*	*08/25/23 00:25*	*1*
o-Terphenyl	*109*		*70 - 130*	*08/24/23 12:53*	*08/25/23 00:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**53.3**	**F1**	4.97		mg/Kg			08/21/23 14:27	1

Client Sample ID: BH01A

Date Collected: 08/16/23 10:10
Date Received: 08/16/23 16:44
Sample Depth: 3

Lab Sample ID: 890-5114-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		08/25/23 15:10	08/26/23 00:08	1
Toluene	<0.00202	U	0.00202		mg/Kg		08/25/23 15:10	08/26/23 00:08	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		08/25/23 15:10	08/26/23 00:08	1
m-Xylene & p-Xylene	<0.00404	U *+	0.00404		mg/Kg		08/25/23 15:10	08/26/23 00:08	1
o-Xylene	<0.00202	U *+	0.00202		mg/Kg		08/25/23 15:10	08/26/23 00:08	1
Xylenes, Total	<0.00404	U *+	0.00404		mg/Kg		08/25/23 15:10	08/26/23 00:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*08/25/23 15:10*	*08/26/23 00:08*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

Client Sample ID: BH01A

Date Collected: 08/16/23 10:10
Date Received: 08/16/23 16:44
Sample Depth: 3

Lab Sample ID: 890-5114-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*08/25/23 15:10*	*08/26/23 00:08*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			08/28/23 10:58	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			08/25/23 11:26	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		08/24/23 12:53	08/25/23 00:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		08/24/23 12:53	08/25/23 00:46	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/24/23 12:53	08/25/23 00:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*08/24/23 12:53*	*08/25/23 00:46*	*1*
o-Terphenyl	*123*		*70 - 130*	*08/24/23 12:53*	*08/25/23 00:46*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**89.4**		5.00	mg/Kg			08/21/23 14:47	1

Client Sample ID: PH01

Date Collected: 08/16/23 12:00
Date Received: 08/16/23 16:44
Sample Depth: 3

Lab Sample ID: 890-5114-3

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		08/25/23 15:10	08/26/23 00:28	1
Toluene	<0.00201	U	0.00201	mg/Kg		08/25/23 15:10	08/26/23 00:28	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		08/25/23 15:10	08/26/23 00:28	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402	mg/Kg		08/25/23 15:10	08/26/23 00:28	1
o-Xylene	<0.00201	U *+	0.00201	mg/Kg		08/25/23 15:10	08/26/23 00:28	1
Xylenes, Total	<0.00402	U *+	0.00402	mg/Kg		08/25/23 15:10	08/26/23 00:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*08/25/23 15:10*	*08/26/23 00:28*	*1*
1,4-Difluorobenzene (Surr)	*66*	*S1-*	*70 - 130*	*08/25/23 15:10*	*08/26/23 00:28*	*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			08/28/23 10:58	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**54.1**		49.9	mg/Kg			08/25/23 11:26	1

Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

Client Sample ID: PH01

Lab Sample ID: 890-5114-3
Matrix: Solid
Date Collected: 08/16/23 12:00
Date Received: 08/16/23 16:44
Sample Depth: 3

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		08/24/23 12:53	08/25/23 01:29	1
Diesel Range Organics (Over C10-C28)	**54.1**		49.9		mg/Kg		08/24/23 12:53	08/25/23 01:29	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/24/23 12:53	08/25/23 01:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*08/24/23 12:53*	*08/25/23 01:29*	*1*
o-Terphenyl	*104*		*70 - 130*	*08/24/23 12:53*	*08/25/23 01:29*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**75.1**		5.00		mg/Kg			08/21/23 14:54	1

Client Sample ID: PH03

Lab Sample ID: 890-5114-4
Matrix: Solid
Date Collected: 08/16/23 12:15
Date Received: 08/16/23 16:44
Sample Depth: 2

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		08/25/23 15:10	08/26/23 00:48	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/25/23 15:10	08/26/23 00:48	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/25/23 15:10	08/26/23 00:48	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402		mg/Kg		08/25/23 15:10	08/26/23 00:48	1
o-Xylene	<0.00201	U *+	0.00201		mg/Kg		08/25/23 15:10	08/26/23 00:48	1
Xylenes, Total	<0.00402	U *+	0.00402		mg/Kg		08/25/23 15:10	08/26/23 00:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*08/25/23 15:10*	*08/26/23 00:48*	*1*
1,4-Difluorobenzene (Surr)	*73*		*70 - 130*	*08/25/23 15:10*	*08/26/23 00:48*	*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			08/28/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**67.4**		50.3		mg/Kg			08/25/23 11:26	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	<50.3	U	50.3		mg/Kg		08/24/23 12:53	08/25/23 01:50	1
Diesel Range Organics (Over C10-C28)	**67.4**		50.3		mg/Kg		08/24/23 12:53	08/25/23 01:50	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		08/24/23 12:53	08/25/23 01:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*08/24/23 12:53*	*08/25/23 01:50*	*1*
o-Terphenyl	*105*		*70 - 130*	*08/24/23 12:53*	*08/25/23 01:50*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

Client Sample ID: PH03

Lab Sample ID: 890-5114-4
Matrix: Solid
Date Collected: 08/16/23 12:15
Date Received: 08/16/23 16:44
Sample Depth: 2

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	45.7		4.98		mg/Kg			08/21/23 15:14	1

Client Sample ID: PH04

Lab Sample ID: 890-5114-5
Matrix: Solid
Date Collected: 08/16/23 12:50
Date Received: 08/16/23 16:44
Sample Depth: 3

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		08/25/23 15:10	08/26/23 01:09	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/25/23 15:10	08/26/23 01:09	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/25/23 15:10	08/26/23 01:09	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		08/25/23 15:10	08/26/23 01:09	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		08/25/23 15:10	08/26/23 01:09	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		08/25/23 15:10	08/26/23 01:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*08/25/23 15:10*	*08/26/23 01:09*	*1*
1,4-Difluorobenzene (Surr)	*58*	*S1-*	*70 - 130*	*08/25/23 15:10*	*08/26/23 01:09*	*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			08/28/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			08/25/23 11:26	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	<50.2	U	50.2		mg/Kg		08/24/23 12:53	08/25/23 02:11	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		08/24/23 12:53	08/25/23 02:11	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		08/24/23 12:53	08/25/23 02:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*08/24/23 12:53*	*08/25/23 02:11*	*1*
o-Terphenyl	*101*		*70 - 130*	*08/24/23 12:53*	*08/25/23 02:11*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	174		4.97		mg/Kg			08/21/23 15:20	1

Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

Client Sample ID: PH02

Lab Sample ID: 890-5114-6
Matrix: Solid
Date Collected: 08/16/23 14:20
Date Received: 08/16/23 16:44
Sample Depth: 3

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		08/25/23 15:10	08/26/23 01:29	1
Toluene	<0.00198	U	0.00198		mg/Kg		08/25/23 15:10	08/26/23 01:29	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		08/25/23 15:10	08/26/23 01:29	1
m-Xylene & p-Xylene	<0.00397	U *+	0.00397		mg/Kg		08/25/23 15:10	08/26/23 01:29	1
o-Xylene	<0.00198	U *+	0.00198		mg/Kg		08/25/23 15:10	08/26/23 01:29	1
Xylenes, Total	<0.00397	U *+	0.00397		mg/Kg		08/25/23 15:10	08/26/23 01:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*08/25/23 15:10*	*08/26/23 01:29*	*1*
1,4-Difluorobenzene (Surr)	*60*	*S1-*	*70 - 130*	*08/25/23 15:10*	*08/26/23 01:29*	*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			08/28/23 10:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			08/25/23 11:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		08/24/23 12:53	08/25/23 02:32	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		08/24/23 12:53	08/25/23 02:32	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		08/24/23 12:53	08/25/23 02:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*08/24/23 12:53*	*08/25/23 02:32*	*1*
o-Terphenyl	*116*		*70 - 130*	*08/24/23 12:53*	*08/25/23 02:32*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**161**		5.02		mg/Kg			08/21/23 15:27	1

Client Sample ID: PH05

Lab Sample ID: 890-5114-7
Matrix: Solid
Date Collected: 08/16/23 15:15
Date Received: 08/16/23 16:44
Sample Depth: 3

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		08/25/23 15:10	08/26/23 01:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/25/23 15:10	08/26/23 01:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/25/23 15:10	08/26/23 01:50	1
m-Xylene & p-Xylene	<0.00400	U *+	0.00400		mg/Kg		08/25/23 15:10	08/26/23 01:50	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		08/25/23 15:10	08/26/23 01:50	1
Xylenes, Total	<0.00400	U *+	0.00400		mg/Kg		08/25/23 15:10	08/26/23 01:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*08/25/23 15:10*	*08/26/23 01:50*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

Client Sample ID: PH05

Date Collected: 08/16/23 15:15
Date Received: 08/16/23 16:44
Sample Depth: 3

Lab Sample ID: 890-5114-7

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*60*	*S1-*	*70 - 130*	*08/25/23 15:10*	*08/26/23 01:50*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			08/28/23 10:58	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			08/25/23 11:26	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		08/24/23 12:53	08/25/23 02:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/24/23 12:53	08/25/23 02:54	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/24/23 12:53	08/25/23 02:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*08/24/23 12:53*	*08/25/23 02:54*	*1*
o-Terphenyl	*103*		*70 - 130*	*08/24/23 12:53*	*08/25/23 02:54*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**118**		4.99		mg/Kg			08/21/23 15:34	1

Surrogate Summary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

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)
890-5114-1	BH01	118	107
890-5114-1 MS	BH01	112	118
890-5114-1 MSD	BH01	111	109
890-5114-2	BH01A	81	85
890-5114-3	PH01	97	66 S1-
890-5114-4	PH03	97	73
890-5114-5	PH04	98	58 S1-
890-5114-6	PH02	101	60 S1-
890-5114-7	PH05	102	60 S1-
LCS 880-61151/1-A	Lab Control Sample	130	117
LCSD 880-61151/2-A	Lab Control Sample Dup	126	111
MB 880-61051/5-A	Method Blank	74	90
MB 880-61151/5-A	Method Blank	75	76

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)
890-5084-A-1-D MS	Matrix Spike	108	98
890-5084-A-1-E MSD	Matrix Spike Duplicate	103	98
890-5114-1	BH01	118	109
890-5114-2	BH01A	123	123
890-5114-3	PH01	101	104
890-5114-4	PH03	104	105
890-5114-5	PH04	99	101
890-5114-6	PH02	117	116
890-5114-7	PH05	103	103
LCS 880-61009/2-A	Lab Control Sample	97	105
LCSD 880-61009/3-A	Lab Control Sample Dup	103	117
MB 880-61009/1-A	Method Blank	153 S1+	167 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-61051/5-A
Matrix: Solid
Analysis Batch: 61057

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61051

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/25/23 08:20	08/25/23 12:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/25/23 08:20	08/25/23 12:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/25/23 08:20	08/25/23 12:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/25/23 08:20	08/25/23 12:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/25/23 08:20	08/25/23 12:28	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/25/23 08:20	08/25/23 12:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*08/25/23 08:20*	*08/25/23 12:28*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*08/25/23 08:20*	*08/25/23 12:28*	*1*

Lab Sample ID: MB 880-61151/5-A
Matrix: Solid
Analysis Batch: 61057

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61151

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/25/23 15:10	08/25/23 23:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/25/23 15:10	08/25/23 23:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/25/23 15:10	08/25/23 23:26	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/25/23 15:10	08/25/23 23:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/25/23 15:10	08/25/23 23:26	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/25/23 15:10	08/25/23 23:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*70 - 130*	*08/25/23 15:10*	*08/25/23 23:26*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*08/25/23 15:10*	*08/25/23 23:26*	*1*

Lab Sample ID: LCS 880-61151/1-A
Matrix: Solid
Analysis Batch: 61057

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61151

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08791		mg/Kg		88	70 - 130		
Toluene			0.100	0.1035		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.1105		mg/Kg		110	70 - 130		
m-Xylene & p-Xylene			0.200	0.2469		mg/Kg		123	70 - 130		
o-Xylene			0.100	0.1222		mg/Kg		122	70 - 130		

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

Lab Sample ID: LCSD 880-61151/2-A
Matrix: Solid
Analysis Batch: 61057

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61151

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09364		mg/Kg		94	70 - 130	6	35

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

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

Lab Sample ID: LCSD 880-61151/2-A
Matrix: Solid
Analysis Batch: 61057

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61151

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1169		mg/Kg		117	70 - 130	12	35
Ethylbenzene			0.100	0.1215		mg/Kg		121	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.2695	*+	mg/Kg		135	70 - 130	9	35
o-Xylene			0.100	0.1335	*+	mg/Kg		134	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: 890-5114-1 MS
Matrix: Solid
Analysis Batch: 61057

Client Sample ID: BH01
Prep Type: Total/NA
Prep Batch: 61151

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.0996	0.09813		mg/Kg		98	70 - 130
Toluene	<0.00200	U	0.0996	0.08929		mg/Kg		89	70 - 130
Ethylbenzene	0.00664	F1	0.0996	0.07559	F1	mg/Kg		69	70 - 130
m-Xylene & p-Xylene	0.0806	*+ F1	0.199	0.2052	F1	mg/Kg		63	70 - 130
o-Xylene	0.0222	*+ F1	0.0996	0.08877	F1	mg/Kg		67	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*

Lab Sample ID: 890-5114-1 MSD
Matrix: Solid
Analysis Batch: 61057

Client Sample ID: BH01
Prep Type: Total/NA
Prep Batch: 61151

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.101	0.08505		mg/Kg		83	70 - 130	14	35
Toluene	<0.00200	U	0.101	0.08300		mg/Kg		82	70 - 130	7	35
Ethylbenzene	0.00664	F1	0.101	0.07019	F1	mg/Kg		63	70 - 130	7	35
m-Xylene & p-Xylene	0.0806	*+ F1	0.202	0.1976	F1	mg/Kg		58	70 - 130	4	35
o-Xylene	0.0222	*+ F1	0.101	0.08139	F1	mg/Kg		59	70 - 130	9	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

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

Lab Sample ID: MB 880-61009/1-A
Matrix: Solid
Analysis Batch: 60956

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61009

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		08/24/23 12:51	08/24/23 19:47	1

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

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

Lab Sample ID: MB 880-61009/1-A
Matrix: Solid
Analysis Batch: 60956

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61009

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		08/24/23 12:51	08/24/23 19:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/24/23 12:51	08/24/23 19:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*153*	*S1+*	*70 - 130*	*08/24/23 12:51*	*08/24/23 19:47*	*1*
o-Terphenyl	*167*	*S1+*	*70 - 130*	*08/24/23 12:51*	*08/24/23 19:47*	*1*

Lab Sample ID: LCS 880-61009/2-A
Matrix: Solid
Analysis Batch: 60956

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61009

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	924.4		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	850.1		mg/Kg		85	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*97*		*70 - 130*
o-Terphenyl	*105*		*70 - 130*

Lab Sample ID: LCSD 880-61009/3-A
Matrix: Solid
Analysis Batch: 60956

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61009

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	969.2		mg/Kg		97	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	861.8		mg/Kg		86	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*103*		*70 - 130*
o-Terphenyl	*117*		*70 - 130*

Lab Sample ID: 890-5084-A-1-D MS
Matrix: Solid
Analysis Batch: 60956

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 61009

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	1010	1303		mg/Kg		127	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1010	978.3		mg/Kg		95	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

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

Lab Sample ID: 890-5084-A-1-E MSD
Matrix: Solid
Analysis Batch: 60956

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 61009

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	1010	1245		mg/Kg		121	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<50.0	U	1010	959.7		mg/Kg		93	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*103*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-60585/1-A
Matrix: Solid
Analysis Batch: 60731

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			08/21/23 12:34	1

Lab Sample ID: LCS 880-60585/2-A
Matrix: Solid
Analysis Batch: 60731

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	255.0		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-60585/3-A
Matrix: Solid
Analysis Batch: 60731

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	256.4		mg/Kg		103	90 - 110	1	20

Lab Sample ID: 890-5114-1 MS
Matrix: Solid
Analysis Batch: 60731

Client Sample ID: BH01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	53.3	F1	249	333.8	F1	mg/Kg		113	90 - 110		

Lab Sample ID: 890-5114-1 MSD
Matrix: Solid
Analysis Batch: 60731

Client Sample ID: BH01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	53.3	F1	249	334.7	F1	mg/Kg		113	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

GC VOA

Prep Batch: 61051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-61051/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 61057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5114-1	BH01	Total/NA	Solid	8021B	61151
890-5114-2	BH01A	Total/NA	Solid	8021B	61151
890-5114-3	PH01	Total/NA	Solid	8021B	61151
890-5114-4	PH03	Total/NA	Solid	8021B	61151
890-5114-5	PH04	Total/NA	Solid	8021B	61151
890-5114-6	PH02	Total/NA	Solid	8021B	61151
890-5114-7	PH05	Total/NA	Solid	8021B	61151
MB 880-61051/5-A	Method Blank	Total/NA	Solid	8021B	61051
MB 880-61151/5-A	Method Blank	Total/NA	Solid	8021B	61151
LCS 880-61151/1-A	Lab Control Sample	Total/NA	Solid	8021B	61151
LCSD 880-61151/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	61151
890-5114-1 MS	BH01	Total/NA	Solid	8021B	61151
890-5114-1 MSD	BH01	Total/NA	Solid	8021B	61151

Prep Batch: 61151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5114-1	BH01	Total/NA	Solid	5035	
890-5114-2	BH01A	Total/NA	Solid	5035	
890-5114-3	PH01	Total/NA	Solid	5035	
890-5114-4	PH03	Total/NA	Solid	5035	
890-5114-5	PH04	Total/NA	Solid	5035	
890-5114-6	PH02	Total/NA	Solid	5035	
890-5114-7	PH05	Total/NA	Solid	5035	
MB 880-61151/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-61151/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-61151/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5114-1 MS	BH01	Total/NA	Solid	5035	
890-5114-1 MSD	BH01	Total/NA	Solid	5035	

Analysis Batch: 61278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5114-1	BH01	Total/NA	Solid	Total BTEX	
890-5114-2	BH01A	Total/NA	Solid	Total BTEX	
890-5114-3	PH01	Total/NA	Solid	Total BTEX	
890-5114-4	PH03	Total/NA	Solid	Total BTEX	
890-5114-5	PH04	Total/NA	Solid	Total BTEX	
890-5114-6	PH02	Total/NA	Solid	Total BTEX	
890-5114-7	PH05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 60956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5114-1	BH01	Total/NA	Solid	8015B NM	61009
890-5114-2	BH01A	Total/NA	Solid	8015B NM	61009
890-5114-3	PH01	Total/NA	Solid	8015B NM	61009
890-5114-4	PH03	Total/NA	Solid	8015B NM	61009

QC Association Summary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

GC Semi VOA (Continued)

Analysis Batch: 60956 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5114-5	PH04	Total/NA	Solid	8015B NM	61009
890-5114-6	PH02	Total/NA	Solid	8015B NM	61009
890-5114-7	PH05	Total/NA	Solid	8015B NM	61009
MB 880-61009/1-A	Method Blank	Total/NA	Solid	8015B NM	61009
LCS 880-61009/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	61009
LCSD 880-61009/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	61009
890-5084-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	61009
890-5084-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	61009

Prep Batch: 61009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5114-1	BH01	Total/NA	Solid	8015NM Prep	
890-5114-2	BH01A	Total/NA	Solid	8015NM Prep	
890-5114-3	PH01	Total/NA	Solid	8015NM Prep	
890-5114-4	PH03	Total/NA	Solid	8015NM Prep	
890-5114-5	PH04	Total/NA	Solid	8015NM Prep	
890-5114-6	PH02	Total/NA	Solid	8015NM Prep	
890-5114-7	PH05	Total/NA	Solid	8015NM Prep	
MB 880-61009/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-61009/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-61009/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5084-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5084-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 61132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5114-1	BH01	Total/NA	Solid	8015 NM	
890-5114-2	BH01A	Total/NA	Solid	8015 NM	
890-5114-3	PH01	Total/NA	Solid	8015 NM	
890-5114-4	PH03	Total/NA	Solid	8015 NM	
890-5114-5	PH04	Total/NA	Solid	8015 NM	
890-5114-6	PH02	Total/NA	Solid	8015 NM	
890-5114-7	PH05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 60585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5114-1	BH01	Soluble	Solid	DI Leach	
890-5114-2	BH01A	Soluble	Solid	DI Leach	
890-5114-3	PH01	Soluble	Solid	DI Leach	
890-5114-4	PH03	Soluble	Solid	DI Leach	
890-5114-5	PH04	Soluble	Solid	DI Leach	
890-5114-6	PH02	Soluble	Solid	DI Leach	
890-5114-7	PH05	Soluble	Solid	DI Leach	
MB 880-60585/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-60585/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-60585/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5114-1 MS	BH01	Soluble	Solid	DI Leach	
890-5114-1 MSD	BH01	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

HPLC/IC

Analysis Batch: 60731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5114-1	BH01	Soluble	Solid	300.0	60585
890-5114-2	BH01A	Soluble	Solid	300.0	60585
890-5114-3	PH01	Soluble	Solid	300.0	60585
890-5114-4	PH03	Soluble	Solid	300.0	60585
890-5114-5	PH04	Soluble	Solid	300.0	60585
890-5114-6	PH02	Soluble	Solid	300.0	60585
890-5114-7	PH05	Soluble	Solid	300.0	60585
MB 880-60585/1-A	Method Blank	Soluble	Solid	300.0	60585
LCS 880-60585/2-A	Lab Control Sample	Soluble	Solid	300.0	60585
LCSD 880-60585/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	60585
890-5114-1 MS	BH01	Soluble	Solid	300.0	60585
890-5114-1 MSD	BH01	Soluble	Solid	300.0	60585

Lab Chronicle

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

Client Sample ID: BH01

Date Collected: 08/16/23 09:35
Date Received: 08/16/23 16:44

Lab Sample ID: 890-5114-1
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	61151	08/25/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61057	08/25/23 23:47	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61278	08/28/23 10:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			61132	08/25/23 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	61009	08/24/23 12:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	60956	08/25/23 00:25	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	60585	08/18/23 15:24	CH	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	60731	08/21/23 14:27	CH	EET MID

Client Sample ID: BH01A

Date Collected: 08/16/23 10:10
Date Received: 08/16/23 16:44

Lab Sample ID: 890-5114-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	61151	08/25/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61057	08/26/23 00:08	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61278	08/28/23 10:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			61132	08/25/23 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	61009	08/24/23 12:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	60956	08/25/23 00:46	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	60585	08/18/23 15:24	CH	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	60731	08/21/23 14:47	CH	EET MID

Client Sample ID: PH01

Date Collected: 08/16/23 12:00
Date Received: 08/16/23 16:44

Lab Sample ID: 890-5114-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	61151	08/25/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61057	08/26/23 00:28	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61278	08/28/23 10:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			61132	08/25/23 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	61009	08/24/23 12:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	60956	08/25/23 01:29	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	60585	08/18/23 15:24	CH	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	60731	08/21/23 14:54	CH	EET MID

Client Sample ID: PH03

Date Collected: 08/16/23 12:15
Date Received: 08/16/23 16:44

Lab Sample ID: 890-5114-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	61151	08/25/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61057	08/26/23 00:48	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61278	08/28/23 10:58	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

Client Sample ID: PH03
Date Collected: 08/16/23 12:15
Date Received: 08/16/23 16:44

Lab Sample ID: 890-5114-4
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			61132	08/25/23 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	61009	08/24/23 12:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	60956	08/25/23 01:50	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	60585	08/18/23 15:24	CH	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	60731	08/21/23 15:14	CH	EET MID

Client Sample ID: PH04
Date Collected: 08/16/23 12:50
Date Received: 08/16/23 16:44

Lab Sample ID: 890-5114-5
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	61151	08/25/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61057	08/26/23 01:09	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61278	08/28/23 10:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			61132	08/25/23 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	61009	08/24/23 12:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	60956	08/25/23 02:11	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	60585	08/18/23 15:24	CH	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	60731	08/21/23 15:20	CH	EET MID

Client Sample ID: PH02
Date Collected: 08/16/23 14:20
Date Received: 08/16/23 16:44

Lab Sample ID: 890-5114-6
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			5.04 g	5 mL	61151	08/25/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61057	08/26/23 01:29	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61278	08/28/23 10:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			61132	08/25/23 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	61009	08/24/23 12:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	60956	08/25/23 02:32	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	60585	08/18/23 15:24	CH	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	60731	08/21/23 15:27	CH	EET MID

Client Sample ID: PH05
Date Collected: 08/16/23 15:15
Date Received: 08/16/23 16:44

Lab Sample ID: 890-5114-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	61151	08/25/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61057	08/26/23 01:50	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61278	08/28/23 10:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			61132	08/25/23 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	61009	08/24/23 12:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	60956	08/25/23 02:54	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

Client Sample ID: PH05

Date Collected: 08/16/23 15:15
Date Received: 08/16/23 16:44

Lab Sample ID: 890-5114-7

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			5.01 g	50 mL	60585	08/18/23 15:24	CH	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	60731	08/21/23 15:34	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: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

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	T104704400-23-26	06-30-24

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: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

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: Big Eddy Unit 70 Battery

Job ID: 890-5114-1
SDG: 03C1558258

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5114-1	BH01	Solid	08/16/23 09:35	08/16/23 16:44	0.5
890-5114-2	BH01A	Solid	08/16/23 10:10	08/16/23 16:44	3
890-5114-3	PH01	Solid	08/16/23 12:00	08/16/23 16:44	3
890-5114-4	PH03	Solid	08/16/23 12:15	08/16/23 16:44	2
890-5114-5	PH04	Solid	08/16/23 12:50	08/16/23 16:44	3
890-5114-6	PH02	Solid	08/16/23 14:20	08/16/23 16:44	3
890-5114-7	PH05	Solid	08/16/23 15:15	08/16/23 16:44	3

Chain of Custody

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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:	Ben Belill	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:	989-854-0852 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:	Big Eddy Unit 70 Battery	Turn Around	
Project Number:	03C1558258	☒ Routine ☐ Rush	
Project Location:	32.45634, -104.05469	Due Date:	5 days
Sampler's Name:	Mariaha O'Dell	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:	TNM00-7
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.4
Total Containers:		Corrected Temperature:	4.2

ANALYSIS REQUEST

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

890-5114 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Chlorides	BTEX	TPH	Sample Comments
BH01	S	8/16/23	9:35	0.5'	G	1	X	X	X	Incident #:
BH01A			10:10	3'						NAPP2318139530
PH01			12:00	3'						Cost Center:
PH03			12:15	2'						1135891001
PH04			12:50	3'						Ben Belill:
PH02			14:20	3'						bbelill@ensdum.com
PH05			15:15	3'						

MD

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		8-16-23 1644	4		
3			6		
5					

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: 890-1440.1
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 #: 890-5114-1
Address: 1211 W. Florida Ave,	Due Date Requested: 8/22/2023			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: Big Eddy Unit 70 Battery	Project #: 89000093			
Site:	SSOW#:			

Analysis Requested

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:										
BH01 (890-5114-1)	8/16/23	09:35 Mountain		Solid			X	X	X	X	X	1	
BH01A (890-5114-2)	8/16/23	10:10 Mountain		Solid			X	X	X	X	X	1	
PH01 (890-5114-3)	8/16/23	12:00 Mountain		Solid			X	X	X	X	X	1	
PH03 (890-5114-4)	8/16/23	12:15 Mountain		Solid			X	X	X	X	X	1	
PH04 (890-5114-5)	8/16/23	12:50 Mountain		Solid			X	X	X	X	X	1	
PH02 (890-5114-6)	8/16/23	14:20 Mountain		Solid			X	X	X	X	X	1	
PH05 (890-5114-7)	8/16/23	15:15 Mountain		Solid			X	X	X	X	X	1	

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:

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
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *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
Cue			JKramer	8/19/23 1053	

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 1.9/1.6

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5114-1
SDG Number: 03C1558258

Login Number: 5114
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: 890-5114-1
SDG Number: 03C1558258

Login Number: 5114
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 08/18/23 11:00 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").	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 8/28/2023 9:49:32 PM

JOB DESCRIPTION

Big Eddy Unit 70 Battery
SDG NUMBER 03C1558258

JOB NUMBER

890-5123-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization

Generated
8/28/2023 9:49:32 PM

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

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Laboratory Job ID: 890-5123-1
SDG: 03C1558258

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Definitions/Glossary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

Job ID: 890-5123-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5123-1

Receipt
The samples were received on 8/17/2023 1:49 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS01 (890-5123-1), FS02 (890-5123-2), SW01 (890-5123-3) and SW02 (890-5123-4).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-61050/5-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.

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-61031 and analytical batch 880-61042 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-5113-A-21-B), (890-5113-A-21-C MS) and (890-5113-A-21-D 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: FS01 (890-5123-1), FS02 (890-5123-2), SW01 (890-5123-3) and SW02 (890-5123-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-61042/31), (CCV 880-61042/47), (CCV 880-61042/58), (LCS 880-61031/2-A) and (LCSD 880-61031/3-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
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: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

Client Sample ID: FS01

Lab Sample ID: 890-5123-1
Matrix: Solid
Date Collected: 08/17/23 10:40
Date Received: 08/17/23 13:49
Sample Depth: 3

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		08/25/23 08:38	08/26/23 07:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/25/23 08:38	08/26/23 07:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/25/23 08:38	08/26/23 07:20	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		08/25/23 08:38	08/26/23 07:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/25/23 08:38	08/26/23 07:20	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		08/25/23 08:38	08/26/23 07:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*08/25/23 08:38*	*08/26/23 07:20*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*08/25/23 08:38*	*08/26/23 07:20*	*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			08/28/23 10:57	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**50.8**		50.1		mg/Kg			08/28/23 22:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		08/24/23 16:34	08/26/23 02:42	1
Diesel Range Organics (Over C10-C28)	**50.8**		50.1		mg/Kg		08/24/23 16:34	08/26/23 02:42	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		08/24/23 16:34	08/26/23 02:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*139*	*S1+*	*70 - 130*	*08/24/23 16:34*	*08/26/23 02:42*	*1*
o-Terphenyl	*102*		*70 - 130*	*08/24/23 16:34*	*08/26/23 02:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**138**		4.98		mg/Kg			08/22/23 23:23	1

Client Sample ID: FS02

Lab Sample ID: 890-5123-2
Matrix: Solid
Date Collected: 08/17/23 09:40
Date Received: 08/17/23 13:49
Sample Depth: 1

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		08/25/23 08:38	08/26/23 07:41	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/25/23 08:38	08/26/23 07:41	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/25/23 08:38	08/26/23 07:41	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/25/23 08:38	08/26/23 07:41	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/25/23 08:38	08/26/23 07:41	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/25/23 08:38	08/26/23 07:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*08/25/23 08:38*	*08/26/23 07:41*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

Client Sample ID: FS02

Lab Sample ID: 890-5123-2
Matrix: Solid
Date Collected: 08/17/23 09:40
Date Received: 08/17/23 13:49
Sample Depth: 1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*08/25/23 08:38*	*08/26/23 07:41*	*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			08/28/23 10:57	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**716**		49.8	mg/Kg			08/28/23 22:20	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		08/24/23 16:34	08/26/23 03:03	1
Diesel Range Organics (Over C10-C28)	**716**		49.8	mg/Kg		08/24/23 16:34	08/26/23 03:03	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		08/24/23 16:34	08/26/23 03:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*140*	*S1+*	*70 - 130*	*08/24/23 16:34*	*08/26/23 03:03*	*1*
o-Terphenyl	*99*		*70 - 130*	*08/24/23 16:34*	*08/26/23 03:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**66.2**		5.04	mg/Kg			08/22/23 23:29	1

Client Sample ID: SW01

Lab Sample ID: 890-5123-3
Matrix: Solid
Date Collected: 08/17/23 09:45
Date Received: 08/17/23 13:49
Sample Depth: 0 - 3

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		08/25/23 08:38	08/26/23 08:02	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/25/23 08:38	08/26/23 08:02	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/25/23 08:38	08/26/23 08:02	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/25/23 08:38	08/26/23 08:02	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/25/23 08:38	08/26/23 08:02	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/25/23 08:38	08/26/23 08:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*08/25/23 08:38*	*08/26/23 08:02*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*08/25/23 08:38*	*08/26/23 08:02*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			08/28/23 10:57	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1740**		49.9	mg/Kg			08/28/23 22:20	1

Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

Client Sample ID: SW01

Date Collected: 08/17/23 09:45
Date Received: 08/17/23 13:49
Sample Depth: 0 - 3

Lab Sample ID: 890-5123-3
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		08/24/23 16:34	08/26/23 03:25	1
Diesel Range Organics (Over C10-C28)	**1740**		49.9		mg/Kg		08/24/23 16:34	08/26/23 03:25	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/24/23 16:34	08/26/23 03:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*138*	*S1+*	*70 - 130*	*08/24/23 16:34*	*08/26/23 03:25*	*1*
o-Terphenyl	*101*		*70 - 130*	*08/24/23 16:34*	*08/26/23 03:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**56.1**		5.02		mg/Kg			08/22/23 23:34	1

Client Sample ID: SW02

Date Collected: 08/17/23 10:15
Date Received: 08/17/23 13:49
Sample Depth: 0 - 3

Lab Sample ID: 890-5123-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		08/25/23 08:38	08/26/23 08:23	1
Toluene	**0.00218**		0.00202		mg/Kg		08/25/23 08:38	08/26/23 08:23	1
Ethylbenzene	**0.00683**		0.00202		mg/Kg		08/25/23 08:38	08/26/23 08:23	1
m-Xylene & p-Xylene	**0.263**		0.00403		mg/Kg		08/25/23 08:38	08/26/23 08:23	1
o-Xylene	**0.0933**		0.00202		mg/Kg		08/25/23 08:38	08/26/23 08:23	1
Xylenes, Total	**0.356**		0.00403		mg/Kg		08/25/23 08:38	08/26/23 08:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*08/25/23 08:38*	*08/26/23 08:23*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*08/25/23 08:38*	*08/26/23 08:23*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.365**		0.00403		mg/Kg			08/28/23 10:57	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1980**		50.4		mg/Kg			08/28/23 22:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**214**		50.4		mg/Kg		08/24/23 16:34	08/26/23 03:46	1
Diesel Range Organics (Over C10-C28)	**1770**		50.4		mg/Kg		08/24/23 16:34	08/26/23 03:46	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		08/24/23 16:34	08/26/23 03:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*166*	*S1+*	*70 - 130*	*08/24/23 16:34*	*08/26/23 03:46*	*1*
o-Terphenyl	*118*		*70 - 130*	*08/24/23 16:34*	*08/26/23 03:46*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

Client Sample ID: SW02
Date Collected: 08/17/23 10:15
Date Received: 08/17/23 13:49
Sample Depth: 0 - 3

Lab Sample ID: 890-5123-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	186		5.00		mg/Kg			08/22/23 23:40	1

Surrogate Summary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

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)
880-32541-A-1-A MS	Matrix Spike	86	103
880-32541-A-1-B MSD	Matrix Spike Duplicate	101	111
890-5123-1	FS01	83	110
890-5123-2	FS02	82	111
890-5123-3	SW01	82	116
890-5123-4	SW02	128	91
LCS 880-61053/1-A	Lab Control Sample	93	109
LCSD 880-61053/2-A	Lab Control Sample Dup	98	107
MB 880-61050/5-A	Method Blank	66 S1-	101
MB 880-61053/5-A	Method Blank	73	98

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-5113-A-21-C MS	Matrix Spike	138 S1+	97
890-5113-A-21-D MSD	Matrix Spike Duplicate	138 S1+	95
890-5123-1	FS01	139 S1+	102
890-5123-2	FS02	140 S1+	99
890-5123-3	SW01	138 S1+	101
890-5123-4	SW02	166 S1+	118
LCS 880-61031/2-A	Lab Control Sample	137 S1+	123
LCSD 880-61031/3-A	Lab Control Sample Dup	143 S1+	115
MB 880-61031/1-A	Method Blank	254 S1+	200 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-61050/5-A
Matrix: Solid
Analysis Batch: 61058

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61050

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/25/23 08:09	08/25/23 13:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/25/23 08:09	08/25/23 13:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/25/23 08:09	08/25/23 13:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/25/23 08:09	08/25/23 13:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/25/23 08:09	08/25/23 13:29	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/25/23 08:09	08/25/23 13:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*66*	*S1-*	*70 - 130*	*08/25/23 08:09*	*08/25/23 13:29*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*08/25/23 08:09*	*08/25/23 13:29*	*1*

Lab Sample ID: MB 880-61053/5-A
Matrix: Solid
Analysis Batch: 61058

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61053

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/25/23 08:38	08/26/23 00:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/25/23 08:38	08/26/23 00:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/25/23 08:38	08/26/23 00:27	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/25/23 08:38	08/26/23 00:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/25/23 08:38	08/26/23 00:27	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/25/23 08:38	08/26/23 00:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*73*		*70 - 130*	*08/25/23 08:38*	*08/26/23 00:27*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*08/25/23 08:38*	*08/26/23 00:27*	*1*

Lab Sample ID: LCS 880-61053/1-A
Matrix: Solid
Analysis Batch: 61058

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61053

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1032		mg/Kg		103	70 - 130		
Toluene			0.100	0.1034		mg/Kg		103	70 - 130		
Ethylbenzene			0.100	0.09020		mg/Kg		90	70 - 130		
m-Xylene & p-Xylene			0.200	0.1938		mg/Kg		97	70 - 130		
o-Xylene			0.100	0.09754		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: LCSD 880-61053/2-A
Matrix: Solid
Analysis Batch: 61058

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61053

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09801		mg/Kg		98	70 - 130	5	35

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

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

Lab Sample ID: LCSD 880-61053/2-A
Matrix: Solid
Analysis Batch: 61058

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61053

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1047		mg/Kg		105	70 - 130	1	35
Ethylbenzene			0.100	0.09536		mg/Kg		95	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.2085		mg/Kg		104	70 - 130	7	35
o-Xylene			0.100	0.1052		mg/Kg		105	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 880-32541-A-1-A MS
Matrix: Solid
Analysis Batch: 61058

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 61053

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198	U	0.101	0.08185		mg/Kg		81	70 - 130
Toluene	<0.00198	U	0.101	0.08498		mg/Kg		84	70 - 130
Ethylbenzene	<0.00198	U	0.101	0.07343		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	<0.00396	U	0.202	0.1555		mg/Kg		77	70 - 130
o-Xylene	<0.00198	U	0.101	0.07817		mg/Kg		78	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 880-32541-A-1-B MSD
Matrix: Solid
Analysis Batch: 61058

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 61053

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.0998	0.09779		mg/Kg		98	70 - 130	18	35
Toluene	<0.00198	U	0.0998	0.1035		mg/Kg		104	70 - 130	20	35
Ethylbenzene	<0.00198	U	0.0998	0.09019		mg/Kg		90	70 - 130	20	35
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1915		mg/Kg		96	70 - 130	21	35
o-Xylene	<0.00198	U	0.0998	0.09597		mg/Kg		96	70 - 130	20	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

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

Lab Sample ID: MB 880-61031/1-A
Matrix: Solid
Analysis Batch: 61042

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61031

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		08/24/23 16:34	08/25/23 20:41	1

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

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

Lab Sample ID: MB 880-61031/1-A
Matrix: Solid
Analysis Batch: 61042

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61031

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		08/24/23 16:34	08/25/23 20:41	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/24/23 16:34	08/25/23 20:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*254*	*S1+*	*70 - 130*	*08/24/23 16:34*	*08/25/23 20:41*	*1*
o-Terphenyl	*200*	*S1+*	*70 - 130*	*08/24/23 16:34*	*08/25/23 20:41*	*1*

Lab Sample ID: LCS 880-61031/2-A
Matrix: Solid
Analysis Batch: 61042

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61031

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1036		mg/Kg		104	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1045		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*137*	*S1+*	*70 - 130*
o-Terphenyl	*123*		*70 - 130*

Lab Sample ID: LCSD 880-61031/3-A
Matrix: Solid
Analysis Batch: 61042

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61031

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1045		mg/Kg		104	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1019		mg/Kg		102	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*143*	*S1+*	*70 - 130*
o-Terphenyl	*115*		*70 - 130*

Lab Sample ID: 890-5113-A-21-C MS
Matrix: Solid
Analysis Batch: 61042

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 61031

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	1010	954.4		mg/Kg		90	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.2	U	1010	1122		mg/Kg		109	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*138*	*S1+*	*70 - 130*
o-Terphenyl	*97*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

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

Lab Sample ID: 890-5113-A-21-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61042 — **Prep Batch: 61031**

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	<50.2	U	1010	968.6		mg/Kg		92	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.2	U	1010	1119		mg/Kg		109	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*138*	*S1+*	*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-60728/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 60835

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			08/22/23 20:56	1

Lab Sample ID: LCS 880-60728/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 60835

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	253.0		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-60728/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 60835

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	257.8		mg/Kg		103	90 - 110	2	20

Lab Sample ID: 890-5121-A-4-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 60835

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	573		1260	1792		mg/Kg		97	90 - 110		

Lab Sample ID: 890-5121-A-4-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 60835

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	573		1260	1774		mg/Kg		95	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

GC VOA

Prep Batch: 61050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-61050/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 61053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5123-1	FS01	Total/NA	Solid	5035	
890-5123-2	FS02	Total/NA	Solid	5035	
890-5123-3	SW01	Total/NA	Solid	5035	
890-5123-4	SW02	Total/NA	Solid	5035	
MB 880-61053/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-61053/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-61053/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-32541-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-32541-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 61058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5123-1	FS01	Total/NA	Solid	8021B	61053
890-5123-2	FS02	Total/NA	Solid	8021B	61053
890-5123-3	SW01	Total/NA	Solid	8021B	61053
890-5123-4	SW02	Total/NA	Solid	8021B	61053
MB 880-61050/5-A	Method Blank	Total/NA	Solid	8021B	61050
MB 880-61053/5-A	Method Blank	Total/NA	Solid	8021B	61053
LCS 880-61053/1-A	Lab Control Sample	Total/NA	Solid	8021B	61053
LCSD 880-61053/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	61053
880-32541-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	61053
880-32541-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	61053

Analysis Batch: 61277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5123-1	FS01	Total/NA	Solid	Total BTEX	
890-5123-2	FS02	Total/NA	Solid	Total BTEX	
890-5123-3	SW01	Total/NA	Solid	Total BTEX	
890-5123-4	SW02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 61031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5123-1	FS01	Total/NA	Solid	8015NM Prep	
890-5123-2	FS02	Total/NA	Solid	8015NM Prep	
890-5123-3	SW01	Total/NA	Solid	8015NM Prep	
890-5123-4	SW02	Total/NA	Solid	8015NM Prep	
MB 880-61031/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-61031/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-61031/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5113-A-21-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5113-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 61042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5123-1	FS01	Total/NA	Solid	8015B NM	61031

QC Association Summary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

GC Semi VOA (Continued)

Analysis Batch: 61042 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5123-2	FS02	Total/NA	Solid	8015B NM	61031
890-5123-3	SW01	Total/NA	Solid	8015B NM	61031
890-5123-4	SW02	Total/NA	Solid	8015B NM	61031
MB 880-61031/1-A	Method Blank	Total/NA	Solid	8015B NM	61031
LCS 880-61031/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	61031
LCSD 880-61031/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	61031
890-5113-A-21-C MS	Matrix Spike	Total/NA	Solid	8015B NM	61031
890-5113-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	61031

Analysis Batch: 61403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5123-1	FS01	Total/NA	Solid	8015 NM	
890-5123-2	FS02	Total/NA	Solid	8015 NM	
890-5123-3	SW01	Total/NA	Solid	8015 NM	
890-5123-4	SW02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 60728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5123-1	FS01	Soluble	Solid	DI Leach	
890-5123-2	FS02	Soluble	Solid	DI Leach	
890-5123-3	SW01	Soluble	Solid	DI Leach	
890-5123-4	SW02	Soluble	Solid	DI Leach	
MB 880-60728/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-60728/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-60728/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5121-A-4-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-5121-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 60835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5123-1	FS01	Soluble	Solid	300.0	60728
890-5123-2	FS02	Soluble	Solid	300.0	60728
890-5123-3	SW01	Soluble	Solid	300.0	60728
890-5123-4	SW02	Soluble	Solid	300.0	60728
MB 880-60728/1-A	Method Blank	Soluble	Solid	300.0	60728
LCS 880-60728/2-A	Lab Control Sample	Soluble	Solid	300.0	60728
LCSD 880-60728/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	60728
890-5121-A-4-B MS	Matrix Spike	Soluble	Solid	300.0	60728
890-5121-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	60728

Lab Chronicle

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

Client Sample ID: FS01
Date Collected: 08/17/23 10:40
Date Received: 08/17/23 13:49

Lab Sample ID: 890-5123-1
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	61053	08/25/23 08:38	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61058	08/26/23 07:20	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			61277	08/28/23 10:57	AJ	EET MID
Total/NA	Analysis	8015 NM		1			61403	08/28/23 22:20	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	61031	08/24/23 16:34	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61042	08/26/23 02:42	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	60728	08/21/23 11:57	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	60835	08/22/23 23:23	CH	EET MID

Client Sample ID: FS02
Date Collected: 08/17/23 09:40
Date Received: 08/17/23 13:49

Lab Sample ID: 890-5123-2
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	61053	08/25/23 08:38	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61058	08/26/23 07:41	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			61277	08/28/23 10:57	AJ	EET MID
Total/NA	Analysis	8015 NM		1			61403	08/28/23 22:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	61031	08/24/23 16:34	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61042	08/26/23 03:03	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	60728	08/21/23 11:57	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	60835	08/22/23 23:29	CH	EET MID

Client Sample ID: SW01
Date Collected: 08/17/23 09:45
Date Received: 08/17/23 13:49

Lab Sample ID: 890-5123-3
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			5.00 g	5 mL	61053	08/25/23 08:38	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61058	08/26/23 08:02	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			61277	08/28/23 10:57	AJ	EET MID
Total/NA	Analysis	8015 NM		1			61403	08/28/23 22:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	61031	08/24/23 16:34	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61042	08/26/23 03:25	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	60728	08/21/23 11:57	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	60835	08/22/23 23:34	CH	EET MID

Client Sample ID: SW02
Date Collected: 08/17/23 10:15
Date Received: 08/17/23 13:49

Lab Sample ID: 890-5123-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	61053	08/25/23 08:38	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61058	08/26/23 08:23	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			61277	08/28/23 10:57	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

Client Sample ID: SW02

Date Collected: 08/17/23 10:15
Date Received: 08/17/23 13:49

Lab Sample ID: 890-5123-4

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			61403	08/28/23 22:20	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	61031	08/24/23 16:34	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61042	08/26/23 03:46	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	60728	08/21/23 11:57	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	60835	08/22/23 23:40	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: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

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	T104704400-23-26	06-30-24

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: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

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: Big Eddy Unit 70 Battery

Job ID: 890-5123-1
SDG: 03C1558258

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5123-1	FS01	Solid	08/17/23 10:40	08/17/23 13:49	3
890-5123-2	FS02	Solid	08/17/23 09:40	08/17/23 13:49	1
890-5123-3	SW01	Solid	08/17/23 09:45	08/17/23 13:49	0 - 3
890-5123-4	SW02	Solid	08/17/23 10:15	08/17/23 13:49	0 - 3

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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:	Ben Belill	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:	989-854-0852	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:	Big Eddy Unit 70 Battery	Turn Around	
Project Number:	03C1558258	☒ Routine	☐ Rush
Project Location:	32.45034, -104.05409	Due Date:	5 days
Sampler's Name:	Mariana O'Dell	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:	NM007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	3.4
Total Containers:		Corrected Temperature:	3.2

ANALYSIS REQUEST — Parameters: Chlorides, TPH, BTEX

890-5123 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Chlorides	TPH	BTEX	Sample Comments
FS01	S	8/17/23	10:40	3'	C	1	X	X	X	Incident #:
FS02	↓	↓	9:40	1'	↓	↓	↓	↓	↓	NAPP2318139530
SW01	↓	↓	9:45	0-3'	↓	↓	↓	↓	↓	Cost center:
SW02	↓	↓	10:15	0-3'	↓	↓	↓	↓	↓	1135891001
										Ben Belill:
										bbelill@ensolum.com
										Mariana O'Dell
										modell@ensolum.com
MO										

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	M O'Dell	[signature]	8.17.23 1349	2			
3				4			
5				6			

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5123-1
SDG Number: 03C1558258

Login Number: 5123
List Number: 1
Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5123-1
SDG Number: 03C1558258

Login Number: 5123
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/21/23 08:51 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 9/19/2023 4:07:03 PM Revision 2

JOB DESCRIPTION

BIG EDDY UNIT 70 BATTERY
SDG NUMBER 03C1558258

JOB NUMBER

890-5239-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization

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Revision 2

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

Client: Ensolum
Project/Site: BIG EDDY UNIT 70 BATTERY

Laboratory Job ID: 890-5239-1
SDG: 03C1558258

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Definitions/Glossary

Client: Ensolum
Project/Site: BIG EDDY UNIT 70 BATTERY

Job ID: 890-5239-1
SDG: 03C1558258

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
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
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: BIG EDDY UNIT 70 BATTERY

Job ID: 890-5239-1
SDG: 03C1558258

Job ID: 890-5239-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5239-1

REVISION

The report being provided is a revision of the original report sent on 9/15/2023. The report (revision 2) is being revised due to Per client email, requesting sample depth be corrected to 0-3'.

Report revision history
Revision 1 - 9/19/2023 - Reason - Per client email, requesting TPH re run on FS02A.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

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

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

Receipt
The samples were received on 9/11/2023 2:58 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS02A (890-5239-1) and SW03 (890-5239-2).

GC VOA
Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-62353 and analytical batch 880-62372 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-62371 and analytical batch 880-62395 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-62395/20), (CCV 880-62395/31), (CCV 880-62395/5) and (LCS 880-62371/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS02A (890-5239-1), SW03 (890-5239-2), (880-33190-A-1-B), (880-33190-A-1-C MS) and (880-33190-A-1-D 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.

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: BIG EDDY UNIT 70 BATTERY

Job ID: 890-5239-1
SDG: 03C1558258

Client Sample ID: FS02A
Date Collected: 09/11/23 12:30
Date Received: 09/11/23 14:58
Sample Depth: 3

Lab Sample ID: 890-5239-1
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		09/13/23 15:40	09/13/23 23:33	1
Toluene	**0.00618**		0.00199		mg/Kg		09/13/23 15:40	09/13/23 23:33	1
Ethylbenzene	**0.00730**		0.00199		mg/Kg		09/13/23 15:40	09/13/23 23:33	1
m-Xylene & p-Xylene	**0.0220**		0.00398		mg/Kg		09/13/23 15:40	09/13/23 23:33	1
o-Xylene	**0.0109**		0.00199		mg/Kg		09/13/23 15:40	09/13/23 23:33	1
Xylenes, Total	**0.0329**		0.00398		mg/Kg		09/13/23 15:40	09/13/23 23:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*09/13/23 15:40*	*09/13/23 23:33*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*09/13/23 15:40*	*09/13/23 23:33*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0464**		0.00398		mg/Kg			09/14/23 15:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**158**		49.6		mg/Kg			09/19/23 00:02	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		09/18/23 11:01	09/19/23 00:02	1
Diesel Range Organics (Over C10-C28)	**158**		49.6		mg/Kg		09/18/23 11:01	09/19/23 00:02	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		09/18/23 11:01	09/19/23 00:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*09/18/23 11:01*	*09/19/23 00:02*	*1*
o-Terphenyl	*125*		*70 - 130*	*09/18/23 11:01*	*09/19/23 00:02*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**117**		5.03		mg/Kg			09/15/23 17:51	1

Client Sample ID: SW03
Date Collected: 09/11/23 12:50
Date Received: 09/11/23 14:58
Sample Depth: 0 - 3'

Lab Sample ID: 890-5239-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/13/23 15:40	09/13/23 23:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/13/23 15:40	09/13/23 23:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/13/23 15:40	09/13/23 23:53	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/13/23 15:40	09/13/23 23:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/13/23 15:40	09/13/23 23:53	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/13/23 15:40	09/13/23 23:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*09/13/23 15:40*	*09/13/23 23:53*	*1*

Client Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT 70 BATTERY

Job ID: 890-5239-1
SDG: 03C1558258

Client Sample ID: SW03
Date Collected: 09/11/23 12:50
Date Received: 09/11/23 14:58
Sample Depth: 0 - 3'

Lab Sample ID: 890-5239-2
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*09/13/23 15:40*	*09/13/23 23:53*	*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			09/14/23 15:21	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/14/23 19:45	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		09/13/23 14:38	09/14/23 16:59	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/13/23 14:38	09/14/23 16:59	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/13/23 14:38	09/14/23 16:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*163*	*S1+*	*70 - 130*	*09/13/23 14:38*	*09/14/23 16:59*	*1*
o-Terphenyl	*150*	*S1+*	*70 - 130*	*09/13/23 14:38*	*09/14/23 16:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50.6**		5.03		mg/Kg			09/15/23 17:04	1

Surrogate Summary

Client: Ensolum
Project/Site: BIG EDDY UNIT 70 BATTERY

Job ID: 890-5239-1
SDG: 03C1558258

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-5238-A-1-E MS	Matrix Spike	89	115
890-5238-A-1-F MSD	Matrix Spike Duplicate	101	90
890-5239-1	FS02A	103	76
890-5239-2	SW03	80	88
LCS 880-62353/1-A	Lab Control Sample	101	89
LCSD 880-62353/2-A	Lab Control Sample Dup	112	91
MB 880-62353/5-A	Method Blank	101	103

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)
880-33190-A-1-C MS	Matrix Spike	163 S1+	133 S1+
880-33190-A-1-D MSD	Matrix Spike Duplicate	163 S1+	131 S1+
890-5239-1	FS02A	123	125
890-5239-2	SW03	163 S1+	150 S1+
LCS 880-62371/2-A	Lab Control Sample	122	134 S1+
LCSD 880-62371/3-A	Lab Control Sample Dup	115	109
MB 880-62371/1-A	Method Blank	158 S1+	143 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT 70 BATTERY

Job ID: 890-5239-1
SDG: 03C1558258

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-62353/5-A
Matrix: Solid
Analysis Batch: 62372

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62353

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/13/23 15:40	09/13/23 18:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/13/23 15:40	09/13/23 18:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/13/23 15:40	09/13/23 18:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/13/23 15:40	09/13/23 18:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/13/23 15:40	09/13/23 18:09	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/13/23 15:40	09/13/23 18:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*09/13/23 15:40*	*09/13/23 18:09*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*09/13/23 15:40*	*09/13/23 18:09*	*1*

Lab Sample ID: LCS 880-62353/1-A
Matrix: Solid
Analysis Batch: 62372

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62353

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09577		mg/Kg		96	70 - 130		
Toluene			0.100	0.08898		mg/Kg		89	70 - 130		
Ethylbenzene			0.100	0.08882		mg/Kg		89	70 - 130		
m-Xylene & p-Xylene			0.200	0.1643		mg/Kg		82	70 - 130		
o-Xylene			0.100	0.08560		mg/Kg		86	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: LCSD 880-62353/2-A
Matrix: Solid
Analysis Batch: 62372

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62353

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1041		mg/Kg		104	70 - 130	8	35
Toluene			0.100	0.09731		mg/Kg		97	70 - 130	9	35
Ethylbenzene			0.100	0.09814		mg/Kg		98	70 - 130	10	35
m-Xylene & p-Xylene			0.200	0.2007		mg/Kg		100	70 - 130	20	35
o-Xylene			0.100	0.1072		mg/Kg		107	70 - 130	22	35

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

Lab Sample ID: 890-5238-A-1-E MS
Matrix: Solid
Analysis Batch: 62372

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62353

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U	0.0998	0.09284		mg/Kg		93	70 - 130		
Toluene	<0.00198	U F1	0.0998	0.06428	F1	mg/Kg		64	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT 70 BATTERY

Job ID: 890-5239-1
SDG: 03C1558258

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

Lab Sample ID: 890-5238-A-1-E MS
Matrix: Solid
Analysis Batch: 62372

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62353

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00198	U F2 F1	0.0998	0.05353	F1	mg/Kg		54	70 - 130
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1503		mg/Kg		75	70 - 130
o-Xylene	<0.00198	U	0.0998	0.07122		mg/Kg		71	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*

Lab Sample ID: 890-5238-A-1-F MSD
Matrix: Solid
Analysis Batch: 62372

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 62353

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	0.1042		mg/Kg		104	70 - 130	12	35
Toluene	<0.00198	U F1	0.100	0.08984		mg/Kg		89	70 - 130	33	35
Ethylbenzene	<0.00198	U F2 F1	0.100	0.08134	F2	mg/Kg		81	70 - 130	41	35
m-Xylene & p-Xylene	<0.00396	U	0.201	0.1516		mg/Kg		76	70 - 130	1	35
o-Xylene	<0.00198	U	0.100	0.08166		mg/Kg		81	70 - 130	14	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

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

Lab Sample ID: MB 880-62371/1-A
Matrix: Solid
Analysis Batch: 62395

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62371

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		09/13/23 14:38	09/14/23 08:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/13/23 14:38	09/14/23 08:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/13/23 14:38	09/14/23 08:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*158*	*S1+*	*70 - 130*	*09/13/23 14:38*	*09/14/23 08:16*	*1*
o-Terphenyl	*143*	*S1+*	*70 - 130*	*09/13/23 14:38*	*09/14/23 08:16*	*1*

Lab Sample ID: LCS 880-62371/2-A
Matrix: Solid
Analysis Batch: 62395

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62371

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1146		mg/Kg		115	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1115		mg/Kg		111	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT 70 BATTERY

Job ID: 890-5239-1
SDG: 03C1558258

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

Lab Sample ID: LCS 880-62371/2-A
Matrix: Solid
Analysis Batch: 62395

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62371

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	134	S1+	70 - 130

Lab Sample ID: LCSD 880-62371/3-A
Matrix: Solid
Analysis Batch: 62395

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62371

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1103		mg/Kg		110	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1079		mg/Kg		108	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: 880-33190-A-1-C MS
Matrix: Solid
Analysis Batch: 62395

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62371

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	1010	931.2		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)	147		1010	1184		mg/Kg		103	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	163	S1+	70 - 130
o-Terphenyl	133	S1+	70 - 130

Lab Sample ID: 880-33190-A-1-D MSD
Matrix: Solid
Analysis Batch: 62395

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 62371

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	1010	957.8		mg/Kg		93	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	147		1010	1187		mg/Kg		103	70 - 130	0	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	163	S1+	70 - 130
o-Terphenyl	131	S1+	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: BIG EDDY UNIT 70 BATTERY

Job ID: 890-5239-1
SDG: 03C1558258

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-62408/1-A
Matrix: Solid
Analysis Batch: 62587

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			09/15/23 13:52	1

Lab Sample ID: LCS 880-62408/2-A
Matrix: Solid
Analysis Batch: 62587

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	240.9		mg/Kg		96	90 - 110		

Lab Sample ID: LCSD 880-62408/3-A
Matrix: Solid
Analysis Batch: 62587

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	241.9		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 890-5261-A-7-F MS
Matrix: Solid
Analysis Batch: 62587

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	216		248	454.8		mg/Kg		96	90 - 110		

Lab Sample ID: 890-5261-A-7-G MSD
Matrix: Solid
Analysis Batch: 62587

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	216		248	451.4		mg/Kg		95	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: BIG EDDY UNIT 70 BATTERY

Job ID: 890-5239-1
SDG: 03C1558258

GC VOA

Prep Batch: 62353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5239-1	FS02A	Total/NA	Solid	5035	
890-5239-2	SW03	Total/NA	Solid	5035	
MB 880-62353/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-62353/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-62353/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5238-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-5238-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 62372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5239-1	FS02A	Total/NA	Solid	8021B	62353
890-5239-2	SW03	Total/NA	Solid	8021B	62353
MB 880-62353/5-A	Method Blank	Total/NA	Solid	8021B	62353
LCS 880-62353/1-A	Lab Control Sample	Total/NA	Solid	8021B	62353
LCSD 880-62353/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	62353
890-5238-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	62353
890-5238-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	62353

Analysis Batch: 62471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5239-1	FS02A	Total/NA	Solid	Total BTEX	
890-5239-2	SW03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 62371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5239-2	SW03	Total/NA	Solid	8015NM Prep	
MB 880-62371/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-62371/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-62371/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-33190-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-33190-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 62395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5239-2	SW03	Total/NA	Solid	8015B NM	62371
MB 880-62371/1-A	Method Blank	Total/NA	Solid	8015B NM	62371
LCS 880-62371/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	62371
LCSD 880-62371/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	62371
880-33190-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	62371
880-33190-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	62371

Analysis Batch: 62498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5239-1	FS02A	Total/NA	Solid	8015 NM	
890-5239-2	SW03	Total/NA	Solid	8015 NM	

Prep Batch: 62618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5239-1	FS02A	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: BIG EDDY UNIT 70 BATTERY

Job ID: 890-5239-1
SDG: 03C1558258

GC Semi VOA

Analysis Batch: 62666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5239-1	FS02A	Total/NA	Solid	8015B NM	62618

HPLC/IC

Leach Batch: 62408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5239-1	FS02A	Soluble	Solid	DI Leach	
890-5239-2	SW03	Soluble	Solid	DI Leach	
MB 880-62408/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-62408/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-62408/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5261-A-7-F MS	Matrix Spike	Soluble	Solid	DI Leach	
890-5261-A-7-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 62587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5239-1	FS02A	Soluble	Solid	300.0	62408
890-5239-2	SW03	Soluble	Solid	300.0	62408
MB 880-62408/1-A	Method Blank	Soluble	Solid	300.0	62408
LCS 880-62408/2-A	Lab Control Sample	Soluble	Solid	300.0	62408
LCSD 880-62408/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	62408
890-5261-A-7-F MS	Matrix Spike	Soluble	Solid	300.0	62408
890-5261-A-7-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	62408

Lab Chronicle

Client: Ensolum
Project/Site: BIG EDDY UNIT 70 BATTERY

Job ID: 890-5239-1
SDG: 03C1558258

Client Sample ID: FS02A
Date Collected: 09/11/23 12:30
Date Received: 09/11/23 14:58

Lab Sample ID: 890-5239-1
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			5.03 g	5 mL	62353	09/13/23 15:40	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62372	09/13/23 23:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62471	09/14/23 15:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			62498	09/19/23 00:02	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	62618	09/18/23 11:01	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62666	09/19/23 00:02	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	62408	09/15/23 10:08	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	62587	09/15/23 17:51	SMC	EET MID

Client Sample ID: SW03
Date Collected: 09/11/23 12:50
Date Received: 09/11/23 14:58

Lab Sample ID: 890-5239-2
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			5.01 g	5 mL	62353	09/13/23 15:40	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62372	09/13/23 23:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62471	09/14/23 15:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			62498	09/14/23 19:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	62371	09/13/23 14:38	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62395	09/14/23 16:59	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	62408	09/15/23 10:08	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	62587	09/15/23 17:04	SMC	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: BIG EDDY UNIT 70 BATTERY

Job ID: 890-5239-1
SDG: 03C1558258

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	T104704400-23-26	06-30-24

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: BIG EDDY UNIT 70 BATTERY

Job ID: 890-5239-1
SDG: 03C1558258

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: BIG EDDY UNIT 70 BATTERY

Job ID: 890-5239-1
SDG: 03C1558258

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5239-1	FS02A	Solid	09/11/23 12:30	09/11/23 14:58	3
890-5239-2	SW03	Solid	09/11/23 12:50	09/11/23 14:58	0 - 3'

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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:	Ben Belill	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:	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:	Big Eddy Unit 70 Battery	Turn Around	
Project Number:	03C1558258	☒ Routine ☐ Rush	
Project Location:	32.45634, -104.054609	Due Date:	5 days
Sampler's Name:	Mariana O'Dell	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:	TNM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	3.2
Total Containers:		Corrected Temperature:	3.0

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	Chlorides	TPH	BTEX	Sample Comments
FS02A	S	9/11/23	12:30	3'	C	1	X	X	X	Incident #:
SW03	S	9/11/23	12:50	0-3'	C	1	X	X	X	NAPP2318139530
										Cost center:
										113589 1001
										Ben Belill:
										bbelill@ensolum.com

890-5239 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	[signature]	[signature]	9-11-23 14:58	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5239-1
SDG Number: 03C1558258

Login Number: 5239
List Number: 1
Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5239-1
SDG Number: 03C1558258

Login Number: 5239
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 09/13/23 11:34 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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 10/6/2023 2:46:47 PM

JOB DESCRIPTION

Big Eddy Unit 70 Battery
SDG NUMBER 03C1558258

JOB NUMBER

890-5367-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization

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10/6/2023 2:46:47 PM

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

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Laboratory Job ID: 890-5367-1
SDG: 03C1558258

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Definitions/Glossary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5367-1
SDG: 03C1558258

Qualifiers

GC VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
S1-	Surrogate recovery exceeds control 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.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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
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)

Definitions/Glossary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5367-1
SDG: 03C1558258

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5367-1
SDG: 03C1558258

Job ID: 890-5367-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5367-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

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

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

Receipt
The sample was received on 9/28/2023 12:23 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.6°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: FS02 B (890-5367-1).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: FS02 B (890-5367-1) and (890-5376-A-21-F). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-63761 and analytical batch 880-63990 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 surrogate recovery for the blank associated with preparation batch 880-63699 and analytical batch 880-63712 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-63699/2-A), (LCSD 880-63699/3-A) and (890-5363-A-46-C). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-63699 and analytical batch 880-63712 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.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-63699 and analytical batch 880-63712 was outside control limits. Sample non-homogeneity is suspected.

Method 8015MOD_NM: The continuing calibration verification (CCV) associated with batch 880-63712 recovered above the upper control limit for Diesel Range Organics (Over C10-C28). An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-63712/31).

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

HPLC/IC

Case Narrative

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5367-1
SDG: 03C1558258

Job ID: 890-5367-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-63527 and analytical batch 880-63842 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: Big Eddy Unit 70 Battery

Job ID: 890-5367-1
SDG: 03C1558258

Client Sample ID: FS02 B

Date Collected: 09/28/23 10:25
Date Received: 09/28/23 12:23
Sample Depth: 3'

Lab Sample ID: 890-5367-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *1	0.00199		mg/Kg		10/02/23 13:35	10/05/23 19:45	1
Toluene	<0.00199	U *- *1	0.00199		mg/Kg		10/02/23 13:35	10/05/23 19:45	1
Ethylbenzene	<0.00199	U *- *1	0.00199		mg/Kg		10/02/23 13:35	10/05/23 19:45	1
m-Xylene & p-Xylene	<0.00398	U *- *1	0.00398		mg/Kg		10/02/23 13:35	10/05/23 19:45	1
o-Xylene	<0.00199	U *- *1	0.00199		mg/Kg		10/02/23 13:35	10/05/23 19:45	1
Xylenes, Total	<0.00398	U *- *1	0.00398		mg/Kg		10/02/23 13:35	10/05/23 19:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*10/02/23 13:35*	*10/05/23 19:45*	*1*
1,4-Difluorobenzene (Surr)	*61*	*S1-*	*70 - 130*	*10/02/23 13:35*	*10/05/23 19:45*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/05/23 19:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**94.6**		50.5		mg/Kg			10/02/23 23:55	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U *- *1	50.5		mg/Kg		09/30/23 19:43	10/02/23 23:55	1
Diesel Range Organics (Over C10-C28)	**94.6**	***-**	50.5		mg/Kg		09/30/23 19:43	10/02/23 23:55	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		09/30/23 19:43	10/02/23 23:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*09/30/23 19:43*	*10/02/23 23:55*	*1*
o-Terphenyl	*125*		*70 - 130*	*09/30/23 19:43*	*10/02/23 23:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**116**		5.00		mg/Kg			10/03/23 01:19	1

Surrogate Summary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5367-1
SDG: 03C1558258

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)										
890-5367-1	FS02 B	86	61 S1-										
890-5376-A-21-D MS	Matrix Spike	106	118										
890-5376-A-21-E MSD	Matrix Spike Duplicate	115	120										
LCS 880-63761/1-A	Lab Control Sample	111	116										
LCSD 880-63761/2-A	Lab Control Sample Dup	85	108										
MB 880-63761/5-A	Method Blank	71	93										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-5363-A-46-D MS	Matrix Spike	113	128										
890-5363-A-46-E MSD	Matrix Spike Duplicate	107	100										
890-5367-1	FS02 B	123	125										
LCS 880-63699/2-A	Lab Control Sample	3 S1-	0.2 S1-										
LCSD 880-63699/3-A	Lab Control Sample Dup	2 S1-	0.2 S1-										
MB 880-63699/1-A	Method Blank	159 S1+	183 S1+										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5367-1
SDG: 03C1558258

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-63761/5-A
Matrix: Solid
Analysis Batch: 63990

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63761

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/02/23 13:35	10/05/23 11:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/02/23 13:35	10/05/23 11:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/02/23 13:35	10/05/23 11:42	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/02/23 13:35	10/05/23 11:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/02/23 13:35	10/05/23 11:42	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/02/23 13:35	10/05/23 11:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*70 - 130*	*10/02/23 13:35*	*10/05/23 11:42*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*10/02/23 13:35*	*10/05/23 11:42*	*1*

Lab Sample ID: LCS 880-63761/1-A
Matrix: Solid
Analysis Batch: 63990

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63761

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1055		mg/Kg		105	70 - 130		
Toluene			0.100	0.1112		mg/Kg		111	70 - 130		
Ethylbenzene			0.100	0.1144		mg/Kg		114	70 - 130		
m-Xylene & p-Xylene			0.200	0.2374		mg/Kg		119	70 - 130		
o-Xylene			0.100	0.1156		mg/Kg		116	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

Lab Sample ID: LCSD 880-63761/2-A
Matrix: Solid
Analysis Batch: 63990

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63761

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.07265	*1	mg/Kg		73	70 - 130	37	35
Toluene			0.100	0.06385	*- *1	mg/Kg		64	70 - 130	54	35
Ethylbenzene			0.100	0.05811	*- *1	mg/Kg		58	70 - 130	65	35
m-Xylene & p-Xylene			0.200	0.1107	*- *1	mg/Kg		55	70 - 130	73	35
o-Xylene			0.100	0.05425	*- *1	mg/Kg		54	70 - 130	72	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 890-5376-A-21-D MS
Matrix: Solid
Analysis Batch: 63990

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 63761

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U *1	0.0998	0.1127		mg/Kg		113	70 - 130		
Toluene	<0.00200	U *- *1	0.0998	0.1083		mg/Kg		109	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5367-1
SDG: 03C1558258

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

Lab Sample ID: 890-5376-A-21-D MS
Matrix: Solid
Analysis Batch: 63990

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 63761

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U *- *1	0.0998	0.1087		mg/Kg		109	70 - 130
m-Xylene & p-Xylene	<0.00401	U *- *1	0.200	0.2225		mg/Kg		111	70 - 130
o-Xylene	<0.00200	U *- *1	0.0998	0.1091		mg/Kg		109	70 - 130

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

Lab Sample ID: 890-5376-A-21-E MSD
Matrix: Solid
Analysis Batch: 63990

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 63761

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U *1	0.0990	0.1177		mg/Kg		119	70 - 130	4	35
Toluene	<0.00200	U *- *1	0.0990	0.1130		mg/Kg		114	70 - 130	4	35
Ethylbenzene	<0.00200	U *- *1	0.0990	0.1125		mg/Kg		114	70 - 130	3	35
m-Xylene & p-Xylene	<0.00401	U *- *1	0.198	0.2293		mg/Kg		116	70 - 130	3	35
o-Xylene	<0.00200	U *- *1	0.0990	0.1126		mg/Kg		114	70 - 130	3	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*120*		*70 - 130*

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

Lab Sample ID: MB 880-63699/1-A
Matrix: Solid
Analysis Batch: 63712

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63699

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		09/30/23 19:43	10/02/23 19:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/30/23 19:43	10/02/23 19:53	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/30/23 19:43	10/02/23 19:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*159*	*S1+*	*70 - 130*	*09/30/23 19:43*	*10/02/23 19:53*	*1*
o-Terphenyl	*183*	*S1+*	*70 - 130*	*09/30/23 19:43*	*10/02/23 19:53*	*1*

Lab Sample ID: LCS 880-63699/2-A
Matrix: Solid
Analysis Batch: 63712

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63699

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	55.88	*-	mg/Kg		6	70 - 130
Diesel Range Organics (Over C10-C28)			1000	33.97	J *-	mg/Kg		3	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5367-1
SDG: 03C1558258

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

Lab Sample ID: LCS 880-63699/2-A
Matrix: Solid
Analysis Batch: 63712

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63699

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	3	S1-	70 - 130
o-Terphenyl	0.2	S1-	70 - 130

Lab Sample ID: LCSD 880-63699/3-A
Matrix: Solid
Analysis Batch: 63712

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63699

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	45.28	J *- *1	mg/Kg		5	70 - 130	21	20
Diesel Range Organics (Over C10-C28)			1000	32.34	J *-	mg/Kg		3	70 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	2	S1-	70 - 130
o-Terphenyl	0.2	S1-	70 - 130

Lab Sample ID: 890-5363-A-46-D MS
Matrix: Solid
Analysis Batch: 63712

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 63699

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.6	U *- *1 F2	1000	1005		mg/Kg		98	70 - 130
Diesel Range Organics (Over C10-C28)	<49.6	U *- F2	1000	1245		mg/Kg		121	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	113		70 - 130
o-Terphenyl	128		70 - 130

Lab Sample ID: 890-5363-A-46-E MSD
Matrix: Solid
Analysis Batch: 63712

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 63699

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	<49.6	U *- *1 F2	1000	809.7	F2	mg/Kg		78	70 - 130	22	20
Diesel Range Organics (Over C10-C28)	<49.6	U *- F2	1000	937.4	F2	mg/Kg		91	70 - 130	28	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	100		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5367-1
SDG: 03C1558258

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-63527/1-A
Matrix: Solid
Analysis Batch: 63842

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			10/02/23 22:24	1

Lab Sample ID: LCS 880-63527/2-A
Matrix: Solid
Analysis Batch: 63842

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	244.1		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-63527/3-A
Matrix: Solid
Analysis Batch: 63842

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	243.7		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 880-33751-A-21-B MS
Matrix: Solid
Analysis Batch: 63842

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	735	F1	253	939.5	F1	mg/Kg		81	90 - 110		

Lab Sample ID: 880-33751-A-21-C MSD
Matrix: Solid
Analysis Batch: 63842

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	735	F1	253	939.7	F1	mg/Kg		81	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5367-1
SDG: 03C1558258

GC VOA

Prep Batch: 63761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5367-1	FS02 B	Total/NA	Solid	5035	
MB 880-63761/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-63761/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-63761/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5376-A-21-D MS	Matrix Spike	Total/NA	Solid	5035	
890-5376-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 63990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5367-1	FS02 B	Total/NA	Solid	8021B	63761
MB 880-63761/5-A	Method Blank	Total/NA	Solid	8021B	63761
LCS 880-63761/1-A	Lab Control Sample	Total/NA	Solid	8021B	63761
LCSD 880-63761/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	63761
890-5376-A-21-D MS	Matrix Spike	Total/NA	Solid	8021B	63761
890-5376-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	63761

Analysis Batch: 64121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5367-1	FS02 B	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 63699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5367-1	FS02 B	Total/NA	Solid	8015NM Prep	
MB 880-63699/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-63699/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-63699/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5363-A-46-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5363-A-46-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 63712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5367-1	FS02 B	Total/NA	Solid	8015B NM	63699
MB 880-63699/1-A	Method Blank	Total/NA	Solid	8015B NM	63699
LCS 880-63699/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	63699
LCSD 880-63699/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	63699
890-5363-A-46-D MS	Matrix Spike	Total/NA	Solid	8015B NM	63699
890-5363-A-46-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	63699

Analysis Batch: 63868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5367-1	FS02 B	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 63527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5367-1	FS02 B	Soluble	Solid	DI Leach	
MB 880-63527/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-63527/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-63527/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5367-1
SDG: 03C1558258

HPLC/IC (Continued)

Leach Batch: 63527 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-33751-A-21-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-33751-A-21-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 63842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5367-1	FS02 B	Soluble	Solid	300.0	63527
MB 880-63527/1-A	Method Blank	Soluble	Solid	300.0	63527
LCS 880-63527/2-A	Lab Control Sample	Soluble	Solid	300.0	63527
LCSD 880-63527/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	63527
880-33751-A-21-B MS	Matrix Spike	Soluble	Solid	300.0	63527
880-33751-A-21-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	63527

Lab Chronicle

Client: Ensolum
Project/Site: Big Eddy Unit 70 Battery

Job ID: 890-5367-1
SDG: 03C1558258

Client Sample ID: FS02 B

Date Collected: 09/28/23 10:25
Date Received: 09/28/23 12:23

Lab Sample ID: 890-5367-1

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			5.02 g	5 mL	63761	10/02/23 13:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	63990	10/05/23 19:45	SM	EET MID
Total/NA	Analysis	Total BTEX		1			64121	10/05/23 19:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			63868	10/02/23 23:55	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	63699	09/30/23 19:43	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	63712	10/02/23 23:55	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	63527	09/29/23 13:08	SMC	EET MID
Soluble	Analysis	300.0		1			63842	10/03/23 01:19	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: Big Eddy Unit 70 Battery

Job ID: 890-5367-1
SDG: 03C1558258

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	T104704400-23-26	06-30-24

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: Big Eddy Unit 70 Battery

Job ID: 890-5367-1
SDG: 03C1558258

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: Big Eddy Unit 70 Battery

Job ID: 890-5367-1
SDG: 03C1558258

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5367-1	FS02 B	Solid	09/28/23 10:25	09/28/23 12:23	3'

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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:	Ben Belill	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	City, State ZIP:	Carlsbad, NM 88220
Phone:	989-854-0852	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:	Big Eddy Unit 70 Battery	Turn Around	
Project Number:	03C1558258	☒ Routine	☐ Rush
Project Location:	32.451634, -104.054109	Due Date:	5 days
Sampler's Name:	Mariaha O'Dell	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:	TM-007
Cooler Custody Seals:	Yes No (N/A)		Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)		Temperature Reading:	7.8
Total Containers:			Corrected Temperature:	7.6

ANALYSIS REQUEST

890-5367 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Chlorides	BTEX	TPH	Sample Comments
FS02B	S	9/28/23	10:25	3'	C	1	X	X	X	Incident #: NAPP2318139530 Cost Center: 1135891001 Ben Belill: bbelill@ensolum.com

MD

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	M. O'Dell [signature]	[signature]	9-28 12:22	2			
3				4			
5				6			

Revised Date 06/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5367-1
SDG Number: 03C1558258

Login Number: 5367
List Number: 1
Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5367-1
SDG Number: 03C1558258

Login Number: 5367
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/29/23 11:04 AM

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

ENSOLUM

APPENDIX E

NMOCD Notifications

From:	Hamlet, Robert, EMNRD
To:	Collins, Melanie Suzanne
Cc:	Ben Belill; Green, Garrett J; Tacoma Morrissey; tommee.l.lambert@exxonmobil.com; Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD; Rodgers, Scott, EMNRD
Subject:	Extension Approval - XTO - Big Eddy Unit 70 Battery - Incident Number NAPP2318139530
Date:	Tuesday, September 19, 2023 10:37:00 AM
Attachments:	image003.png

[**EXTERNAL EMAIL**]

RE: Incident #**NAPP2318139530**

Melanie,

Your request for an extension to **October 21st, 2023** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
506 W. Texas Ave.| Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Rodgers, Scott, EMNRD <Scott.Rodgers@emnrd.nm.gov>
Sent: Monday, September 18, 2023 2:37 PM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Subject: FW: [EXTERNAL] XTO - Extension Request - Big Eddy Unit 70 Battery - Incident Number NAPP2318139530

Scott Rodgers ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
8801 Horizon Blvd. NE, Suite 260 | Albuquerque, NM 87113
505.469.1830 | scott.rodgers@emnrd.nm.gov
http://www.emnrd.nm.gov/ocd

From: Collins, Melanie <melanie.collins@exxonmobil.com>
Sent: Monday, September 18, 2023 12:27 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: bbelill@ensolum.com; Green, Garrett J <garrett.green@exxonmobil.com>; Tacoma Morrissey <tmorrissey@ensolum.com>; Lambert, Tommee L <tommee.l.lambert@exxonmobil.com>
Subject: [EXTERNAL] XTO - Extension Request - Big Eddy Unit 70 Battery - Incident Number NAPP2318139530

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

All,

XTO is requesting an extension for the current deadline of September 21, 2023 for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC at the Big Eddy Unit 70 Battery (Incident Number NAPP2318139530). The release occurred on June 23, 2023, and initial site assessment and delineation activities have been completed. Excavation activities have been conducted but laboratory analytical results are currently pending. In order to review laboratory analytical results, potentially conduct additional excavation activities and complete final confirmation soil sample activities, and submit a remediation work plan or closure report, XTO requests a 30 day extension until October 21, 2023.

Thank you,

Melanie Collins
Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

From: Collins, Melanie
To: ocd.enviro (ocd.enviro@emnrd.nm.gov); Harimon, Jocelyn, EMNRD (Jocelyn.Harimon@emnrd.nm.gov); Bratcher, Michael, EMNRD (mike.bratcher@emnrd.nm.gov); Hamlet, Robert, EMNRD (Robert.Hamlet@emnrd.nm.gov)
Cc: Green, Garrett J; DelawareSpills /SM; Ben Belill
Subject: XTO - 48-Hour Liner Inspection Notification - Big Eddy Unit 70 Battery - Incident Number NAPP2318139530
Date: Monday, August 7, 2023 4:29:09 PM
Attachments: image001.png

[**EXTERNAL EMAIL**]

Good afternoon,

This is sent as a 48-hour notification. XTO is scheduled to inspect the following lined containment listed below on **Friday, August 11, 2023**. Please call us with any questions or concerns.

Site: Big Eddy Unit 70 Battery
Incident Number: NAPP2318139530
Time: 10:00 am MST
GPS Coordinates: (32.45634, -104.05469)

Thank you,

Melanie Collins
Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

From: Collins, Melanie
To: ocd.enviro (ocd.enviro@emnrd.nm.gov)
Cc: Green, Garrett J; Ben Belill
Subject: XTO - Sampling Notification (Week of 9/11/23 - 9/15/23)
Date: Wednesday, September 6, 2023 2:39:22 PM
Attachments: image001.png

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the sites listed below for the week of September 11, 2023.

Monday
- JRU 108 / nAPP2217931599
- BEU 70 / NAPP2318139530

Tuesday
- JRU 108 / nAPP2217931599

Wednesday
- JRU 108 / nAPP2217931599

Thursday
- JRU 108 / nAPP2217931599
- PLU 29 Big Sinks West CTB / NAPP2320634792

Friday
- PLU 29 Big Sinks West CTB / NAPP2320634792

Thank you,

Melanie Collins
XTO ENERGY
Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

From: Green, Garrett J
To: Enviro, OCD, EMNRD
Cc: Ben Belill; DelawareSpills /SM; Collins, Melanie
Subject: XTO - Sampling Notification (Week of 9/25/23 - 9/29/23)
Date: Wednesday, September 20, 2023 5:17:46 PM

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the sites listed below for the week of September 25, 2023.

Monday
- JRU 21 DI 9 Riser / NAPP2322141858
- Poker Lake Unit 301H / NAPP2322646789

Tuesday
- North Indian Flats 26 Fed 1 / nAPP2323653065
- Poker Lake Unit 301H / NAPP2322646789

Wednesday
- North Indian Flats 26 Fed 1 / nAPP2323653065
- BEU 70 / NAPP2318139530

Thursday
- PLU 15 Twin Wells Ranch CTB / Napp2323449490
- Perla Verde 31 State Battery / nAPP2322751480 (SLO)

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

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 277738

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 277738
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	XTO's deferral requests final remediation for (Incident Number NAPP2318139530) until final reclamation of the well pad or major construction, whichever comes first. Ensolum and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The area requested for deferral is in the area immediately beneath the lined containment and active production Equipment on the caliche well pad, where remediation would require a major facility deconstruction (Figure 4). The area has been delineated and documented in the report. At this time, OCD approves this request. The Deferral Request and C-141 will be accepted for record and marked accordingly. The release will remain open in OCD database files and reflect an open environmental issue.	2/26/2024