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	NAPP2214544127
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 32.10432 Longitude 103.80249
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU Big Sinks 29 CTB	Site Type Central Tank Battery
Date Release Discovered 05/13/22	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
F	29	25S	31E	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) 26.12	Volume Recovered (bbls) 26.00
☐ 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: The packing on the pump failed, releasing fluids into containment and onto pad. All contained fluids were recovered. A third-part contractor has been retained for remediation purposes.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2214544127
District RP	
Facility ID	
Application ID	

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 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 Adrian Baker to ocd.enviro@state.nm.us; Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD; on Saturday, May 14, 2022 5:21 PM via email.

Initial Response

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

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

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

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

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

Printed Name: Garrett Green
Title: SSHE Coordinator
Signature: 
Date: 05/25/2022
email: garrett.green@exxonmobil.com
Telephone: 575-200-0729

OCD Only

Received by: Jocelyn Harimon
Date: 05/25/2022

Location:	PLU Big Sinks 29 CTB	
Spill Date:	5/13/2022	

Area 1		
Approximate Area =	145.98	cu.ft.
VOLUME OF LEAK		
Total Crude Oil =	26.00	bbls
Total Produced Water =	0.00	bbls

Area 2		
Approximate Area =	533.03	sq. ft.
Average Saturation (or depth) of spill =	0.50	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 =	**26.12**	**bbls**
Total Produced Water =	**0.00**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**26.00**	**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: 110479
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	5/25/2022

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2214544127
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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2214544127
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: Environmental Coordinator

Signature: Date: 08/11/2022

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

OCD Only

Received by: Jocelyn Harimon Date: 08/11/2022

Incident ID	nAPP2214544127
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Garrett Green Title: Environmental Coordinator

Signature: Garrett Green Date: 08/11/2022

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

OCD Only

Received by: Jocelyn Harimon Date: 08/11/2022

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

Closure Approved by: Jennifer Nobui Date: 09/20/2022

Printed Name: Jennifer Nobui Title: Environmental Specialist A

ENSOLUM

August 11, 2022

District II
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

Re: Closure Request
PLU Big Sinks 29 CTB
Incident Number nAPP2214544127
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this Closure Request to document remediation and soil sampling activities at the PLU Big Sinks 29 CTB (Site). The purpose of the Site activities was to assess for the presence or absence of impacts to soil following a release of crude oil originating from a failed transfer pump. Based on field observations and initial soil sample analytical results, XTO excavated impacted soil using a backhoe and hydovac truck and performed confirmation soil sampling. XTO is submitting this Closure Request to the New Mexico Oil Conservation Division (NMOCD) for the Incident Number nAPP2214544127 following successful removal of impacted soil from the Site.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site (Figure 1) is located in Unit F, Section 29, Township 25 South, Range 31 East, in Eddy County, New Mexico (32.10432° N, -103.80249° W) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM).

On May 13, 2022, the packing on a transfer pump failed causing a release of 26.12 barrels (bbls) of crude oil into the secondary containment and onto the surrounding well pad outside of containment. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 26 bbls of released crude oil were recovered from the Site. XTO reported the release to the NMOCD via email on May 14, 2022 and submitted a Release Notification Form C-141 (Form C-141) on May 25, 2022.

SITE CHARATERIZATION AND CLOSURE CRITERIA

The Site was characterized according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) 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. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on information from nearby soil borings installed to determine regional depth to groundwater. XTO advanced soil boring C-4500 approximately 0.9 miles east of the Site in order to assess depth to groundwater in the area. No moisture or groundwater was encountered during drilling activities. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that the groundwater was greater than 110 feet bgs. The Well Record and Log submitted to the New Mexico Office of the State Engineer for this boring is included as Appendix A.

The closest continuously flowing or significant watercourse to the Site is located approximately 4,385 feet south-southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area).

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

SITE ASSESSMENT ACTIVITIES

Prior to conducting on-Site work, a 48-hour advance notice of liner inspection was provided via email to the NMOCD District II. On June 30, 2022, a liner integrity inspection was conducted following fluid recovery from the release. Upon inspection, the liner was determined to be competent. Also on June 30, 2022, Ensolum personnel evaluated the release extent and conducted preliminary site assessment activities. Six preliminary soil samples (SS01 through SS06) were collected at depths of 0.5 feet bgs, two from within the release footprint and one in each cardinal direction (north, south, east, and west). Soil from the delineation soil sample locations was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations from the assessment were documented in the field book. The delineation soil sample locations are depicted on Figure 2. Photographic documentation of the surface impacts at the Site are included as Appendix B.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for the delineation soil samples SS01 and SS02 indicated that TPH-DRO/TPH-GRO and TPH exceeded NMOCD Table 1 Closure Criteria. No other exceedances of

benzene, BTEX, TPH, and/or chloride were detected during the preliminary assessment. Based on these results, the lateral extent of soil impacts were identified during the preliminary assessment. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

REMEDIATION ACTIVITIES AND CONFIRMATION SOIL SAMPLING

Based on the preliminary assessment analytical results described above, XTO removed TPH-impacted soil using a hydrovac truck and backhoe from July 25, 2022 through July 27, 2022. Prior to conducting work, XTO notified the NMOCD of the excavation and confirmation soil sampling and a copy of the notification is attached as Appendix D. Soil was removed to a depth of 1.5 feet bgs across the entire impacted release area as indicated by visible staining and laboratory analytical results for the preliminary soil samples. To direct excavation activities, soil was screened for VOCs and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Photographic documentation of the excavation activities is also included in Appendix B.

Following removal of the impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. As described above, the soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice to be submitted to Eurofins in Carlsbad, New Mexico. All samples were analyzed for BTEX, TPH, and chloride. At the completion of excavation activities, all confirmation samples were compliant with the Site Closure Criteria and compliant with the Table 1 Closure Criteria. Laboratory analytical results are summarized in Table 1, laboratory analytical reports included as Appendix C.

The excavation extent and excavation soil sample locations are presented on Figure 3. The excavation area measured approximately 1,100 square feet. A total of approximately 62 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Hobbs, New Mexico.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the May 13, 2022 release of crude oil. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the strictest Table 1 Closure Criteria. Based on the soil sample laboratory analytical results, no further remediation is required. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions.

Excavation of impacted soil has mitigated impacts at this Site and XTO respectfully requests closure for Incident Number nAPP2214544127.

If you have any questions or comments, please contact Ms. Ashley Ager at (970) 946-1093 or aager@ensolum.com.

Sincerely,
Ensolum, LLC

Stuart Hyde, LG
Senior Geologist

Ashley Ager, MS, PG
Program Director

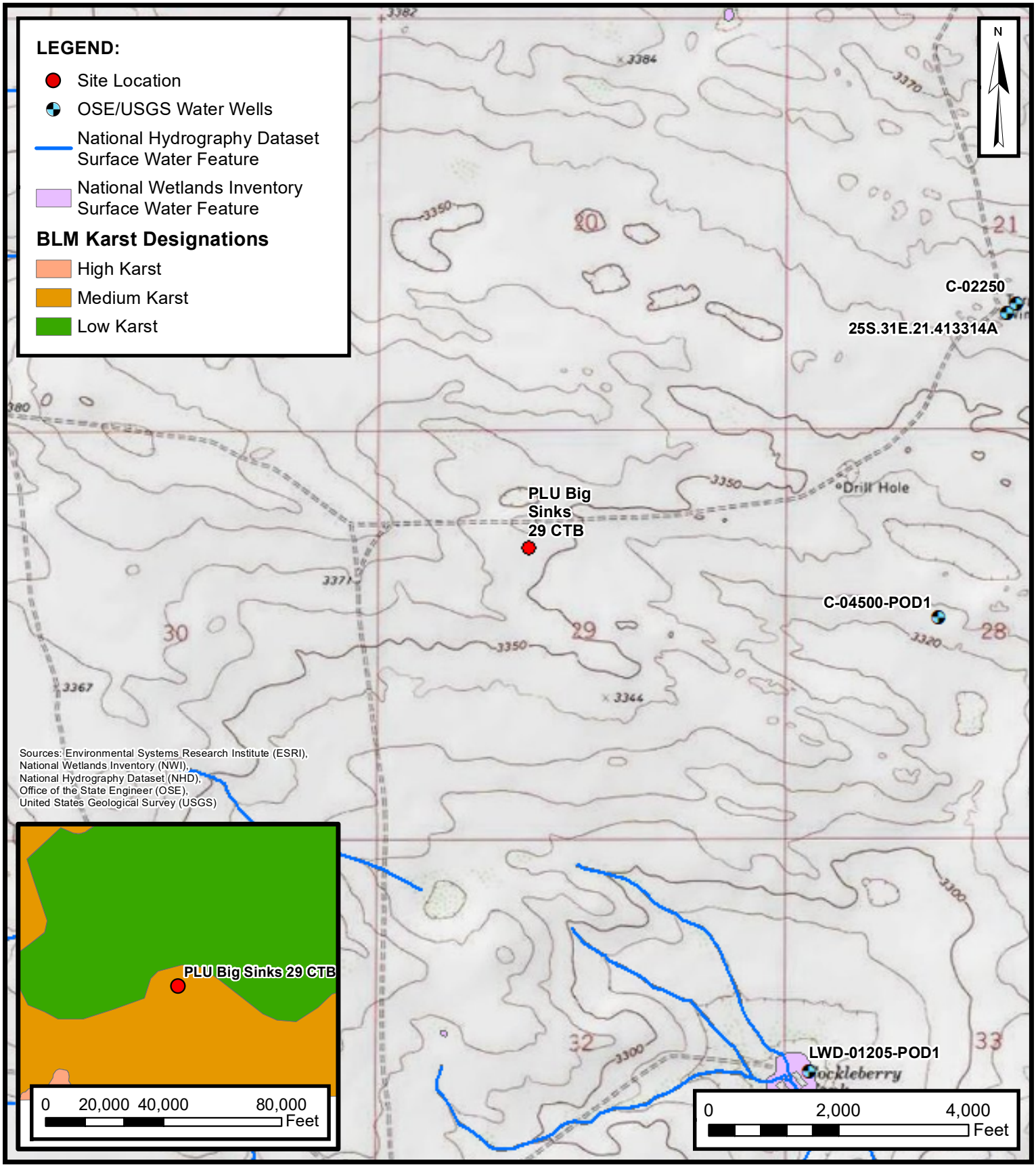
cc: Garrett Green, XTO
Shelby Pennington, XTO
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Well Record and Log
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix D	NMOCD Notifications

ENSOLUM

FIGURES



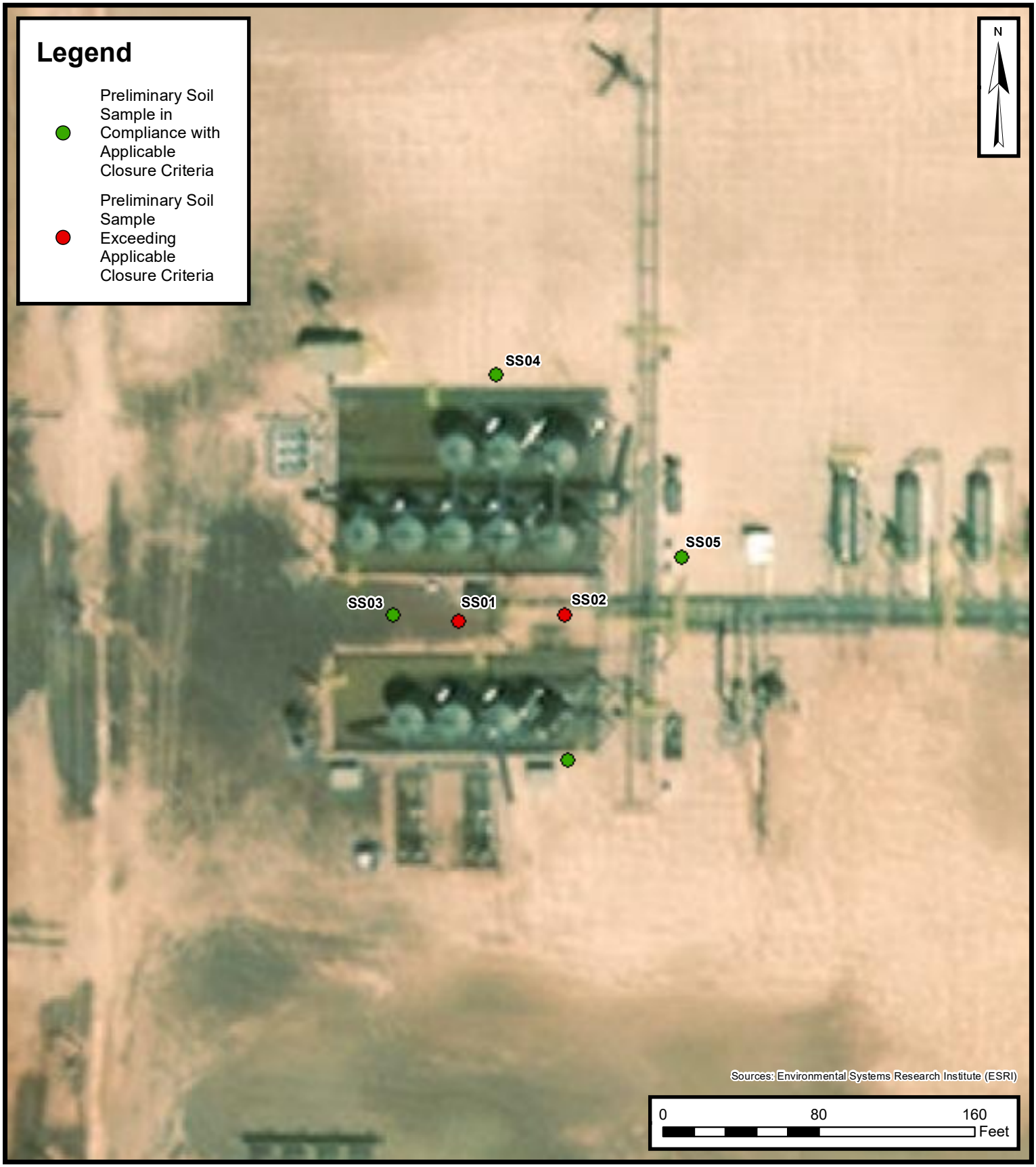
Document Path: C:\Users\Justin.Valdez\GIS\Ensolum GIS\3 - Carlsbad\XTO Energy\03E1558069 - PLU Big Sinks 29 CTB\1 - MXDs\Figure 1 Site Receptor Map.mxd

ENSOLUM
Environmental & Hydrogeologic Consultants

Site Receptor Map

PLU Big Sinks 29 CTB
XTO Energy, Inc.
Incident Number: NAPP2213148421
SENW SEC29-T25S-R31E
Eddy County, NM

FIGURE
1



Document Path: C:\Users\Justin Valdez\GIS\Ensolum GIS\3 - Carlsbad\XTO Energy\03E1558089 - PLU Big Sinks 29 CTB\1 - MXDs\Figure 2 Preliminary Soil Sample Location.mxd

ENSOLUM
Environmental & Hydrogeologic Consultants

Preliminary Soil Sample Locations

PLU Big Sinks 29 CTB
XTO Energy, Inc.
Incident Number: NAPP2213148421
SENW SEC29-T25S-R31E
Eddy County, NM

FIGURE
2

Document Path: C:\Users\Justin.Valdez\GIS\Ensolum GIS\3 - Carlsbad\XTO Energy\03E1558089 - PLU Big Sinks 29 CTB\1 - MXDs\Figure 3 Excavation Soil Sample Locations.mxd

ENSOLUM
Environmental & Hydrogeologic Consultants

Excavation Soil Sample Locations

PLU Big Sinks 29 CTB
XTO Energy, Inc.
Incident Number: NAPP2213148421
SENW SEC29-T25S-R31E
Eddy County, NM

FIGURE
3

ENSOLUM

TABLES

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU Big Sinks 29 CTB
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)	TPH-GRO/TPH-DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
Preliminary Assessment Soil Samples										
SS01	06/30/2022	0.5	<0.000397	0.0501	1,250	9,860	<49.9	**11,100**	**11,100**	8.54
SS02	06/30/2022	0.5	<0.101	1.48	364	15,300	<250	**15,700**	**15,700**	187
SS03	06/30/2022	0.5	<0.00200	<0.00399	28.0	<49.9	<49.9	28.0	28.0	11.1
SS04	06/30/2022	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	38.4
SS05	06/30/2022	0.5	<0.00199	<0.00398	20.2	<49.9	<49.9	20.2	20.2	22.8
SS06	06/30/2022	0.5	<0.00201	<0.00402	<49.8	<49.8	16.4	<49.8	16.4	52.4
Excavation Soil Samples										
FS01	07/26/2022	1.5	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	15.0
FS02	07/26/2022	1.5	<0.00199	0.0157	<50.0	65.5	<50.0	65.5	65.5	70.3
FS03	07/27/2022	1.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	36.1
FS04	07/27/2022	1.5	<0.00198	<0.00396	<49.8	<49.8	<49.8	<49.8	<49.8	24.3
FS05	07/27/2022	1.5	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	25.8
FS06	07/27/2022	1.5	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	14.9

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 1 Closure Criteria or reclamation standard where applicable.
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
<49.9: indicates result less than the stated laboratory reporting limit (RL)

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APPENDIX A

Well Record and Log

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (BH-01)	n/a	C-4500

WELL OWNER NAME(S)	PHONE (OPTIONAL)
XTO Energy (Kyle Littrell)	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
6401 Holiday Hill Dr.	Midland	TX	79707

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	6	6.96	N
	LONGITUDE	103	47	6.75	W

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

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

SE NW Sec. 28 T25S R31E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
03/24/2021	03/24/2021	temporary well material	110	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	110	±6.5	Boring- HSA	--	--	--	--

OSE DIT MAY 5 2021 RECEIVED

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO.	C-4500	POD NO.	1	TRN NO.	682534
LOCATION	Exp 25S.31E.28.144			WELL TAG ID NO.	—

PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	1	1	Caliche, no odor, no stain, tan, light-brown	Y ✓ N	
1	3	2	Sand, no odor, no stain, m-f, well sorted, brown, trace silt, low consolidation	Y ✓ N	
3	7	4	Sandy clay, no odor, no stain, m-f, brown, well sorted, low plasticity, cohesive	Y ✓ N	
7	23	16	Caliche,tan, light brown sand, m-f grained, poorly sorted, low consolidation	Y ✓ N	
23	110	87	sand, brown, no odor, no stain, fine grained, well sorted, low consolidation	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

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

MISCELLANEOUS INFORMATION: PLU 28 BS 126H, Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface.
Logs adapted from WSP on-site geologist.

RECEIVED OSE MAY 5 2021 PM 4:00

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

Shane Eldridge

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — 05/05/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO. C-4500	POD NO. 1	TRN NO. 682534
LOCATION	WELL TAG ID NO.	PAGE 2 OF 2

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc.
PLU Big Sinks 29 CTB
Incident Number nAPP2214544127

Photograph 1 Date: June 30, 2022
Description: View looking east-southeast of soil staining caused by the release

Photograph 2 Date: June 30, 2022
Description: View looking southwest of soil staining and accumulation inside secondary containment

Photograph 3 Date: July 25, 2022
Description: View looking east at confirmation sampling areas FS01 and partially FS02

Photograph 4 Date: July 27, 2022
Description: View looking east at the remedial excavation after impacted soil was removed

ENSOLUM

APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2494-1
Laboratory Sample Delivery Group: 03E1558069
Client Project/Site: PLU Big Sinks 29 CTB

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
7/13/2022 10:12:52 AM

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: PLU Big Sinks 29 CTB

Laboratory Job ID: 890-2494-1
SDG: 03E1558069

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2494-1
Project/Site: PLU Big Sinks 29 CTB SDG: 03E1558069

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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: PLU Big Sinks 29 CTB

Job ID: 890-2494-1
SDG: 03E1558069

Job ID: 890-2494-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2494-1

Receipt
The samples were received on 7/1/2022 9:19 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 5.6°C

GC VOA
Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-29534 and analytical batch 880-29547 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 method blank for preparation batch 880-28993 and analytical batch 880-29112 contained Gasoline Range Organics (GRO)-C6-C10 and Total TPH above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples 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: PLU Big Sinks 29 CTB

Job ID: 890-2494-1
SDG: 03E1558069

Client Sample ID: SS03

Lab Sample ID: 890-2494-1
Matrix: Solid
Date Collected: 06/30/22 13:50
Date Received: 07/01/22 09:19
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/12/22 10:47	07/12/22 18:57	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/12/22 10:47	07/12/22 18:57	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/12/22 10:47	07/12/22 18:57	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/12/22 10:47	07/12/22 18:57	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/12/22 10:47	07/12/22 18:57	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/12/22 10:47	07/12/22 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*07/12/22 10:47*	*07/12/22 18:57*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*07/12/22 10:47*	*07/12/22 18:57*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			07/13/22 10:38	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**28.0**	**J**	49.9	15.0	mg/Kg			07/07/22 09:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**28.0**	**J B**	49.9	15.0	mg/Kg		07/05/22 08:59	07/06/22 13:35	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	15.0	mg/Kg		07/05/22 08:59	07/06/22 13:35	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	15.0	mg/Kg		07/05/22 08:59	07/06/22 13:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*07/05/22 08:59*	*07/06/22 13:35*	*1*
o-Terphenyl	*109*		*70 - 130*	*07/05/22 08:59*	*07/06/22 13:35*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11.1**		5.00		mg/Kg			07/10/22 12:06	1

Client Sample ID: SS04

Lab Sample ID: 890-2494-2
Matrix: Solid
Date Collected: 06/30/22 14:00
Date Received: 07/01/22 09:19
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/12/22 10:47	07/12/22 19:18	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/12/22 10:47	07/12/22 19:18	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/12/22 10:47	07/12/22 19:18	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/12/22 10:47	07/12/22 19:18	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/12/22 10:47	07/12/22 19:18	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/12/22 10:47	07/12/22 19:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*07/12/22 10:47*	*07/12/22 19:18*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU Big Sinks 29 CTB

Job ID: 890-2494-1
SDG: 03E1558069

Client Sample ID: SS04

Date Collected: 06/30/22 14:00
Date Received: 07/01/22 09:19
Sample Depth: 0.5

Lab Sample ID: 890-2494-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*07/12/22 10:47*	*07/12/22 19:18*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/13/22 10:38	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	15.0	mg/Kg			07/07/22 09:01	1

Method: 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	15.0	mg/Kg		07/05/22 08:59	07/06/22 13:57	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	15.0	mg/Kg		07/05/22 08:59	07/06/22 13:57	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	15.0	mg/Kg		07/05/22 08:59	07/06/22 13:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*07/05/22 08:59*	*07/06/22 13:57*	*1*
o-Terphenyl	*93*		*70 - 130*	*07/05/22 08:59*	*07/06/22 13:57*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**38.4**		4.96		mg/Kg			07/11/22 13:40	1

Client Sample ID: SS05

Date Collected: 06/30/22 14:05
Date Received: 07/01/22 09:19
Sample Depth: 0.5

Lab Sample ID: 890-2494-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/12/22 10:47	07/12/22 19:38	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/12/22 10:47	07/12/22 19:38	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/12/22 10:47	07/12/22 19:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/12/22 10:47	07/12/22 19:38	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/12/22 10:47	07/12/22 19:38	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/12/22 10:47	07/12/22 19:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*07/12/22 10:47*	*07/12/22 19:38*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*07/12/22 10:47*	*07/12/22 19:38*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/13/22 10:38	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**20.2**	**J**	49.9	15.0	mg/Kg			07/07/22 09:01	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU Big Sinks 29 CTB

Job ID: 890-2494-1
SDG: 03E1558069

Client Sample ID: SS05

Date Collected: 06/30/22 14:05
Date Received: 07/01/22 09:19
Sample Depth: 0.5

Lab Sample ID: 890-2494-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**20.2**	**J B**	49.9	15.0	mg/Kg		07/05/22 08:59	07/06/22 14:19	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	15.0	mg/Kg		07/05/22 08:59	07/06/22 14:19	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	15.0	mg/Kg		07/05/22 08:59	07/06/22 14:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*07/05/22 08:59*	*07/06/22 14:19*	*1*
o-Terphenyl	*99*		*70 - 130*	*07/05/22 08:59*	*07/06/22 14:19*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**22.8**		4.99		mg/Kg			07/11/22 13:49	1

Client Sample ID: SS06

Date Collected: 06/30/22 14:10
Date Received: 07/01/22 09:19
Sample Depth: 0.5

Lab Sample ID: 890-2494-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/12/22 10:47	07/12/22 19:59	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/12/22 10:47	07/12/22 19:59	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/12/22 10:47	07/12/22 19:59	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/12/22 10:47	07/12/22 19:59	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/12/22 10:47	07/12/22 19:59	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/12/22 10:47	07/12/22 19:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*07/12/22 10:47*	*07/12/22 19:59*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*07/12/22 10:47*	*07/12/22 19:59*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			07/13/22 10:38	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**16.4**	**J**	49.8	14.9	mg/Kg			07/07/22 09:01	1

Method: 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	14.9	mg/Kg		07/05/22 08:59	07/06/22 14:41	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	14.9	mg/Kg		07/05/22 08:59	07/06/22 14:41	1
Oil Range Organics (Over C28-C36)	**16.4**	**J**	49.8	14.9	mg/Kg		07/05/22 08:59	07/06/22 14:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*07/05/22 08:59*	*07/06/22 14:41*	*1*
o-Terphenyl	*95*		*70 - 130*	*07/05/22 08:59*	*07/06/22 14:41*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU Big Sinks 29 CTB

Job ID: 890-2494-1
SDG: 03E1558069

Client Sample ID: SS06
Date Collected: 06/30/22 14:10
Date Received: 07/01/22 09:19
Sample Depth: 0.5

Lab Sample ID: 890-2494-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.4		5.04		mg/Kg			07/10/22 12:52	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU Big Sinks 29 CTB

Job ID: 890-2494-1
SDG: 03E1558069

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)
880-16804-A-1-A MS	Matrix Spike	103	101
880-16804-A-1-B MSD	Matrix Spike Duplicate	98	99
890-2494-1	SS03	102	89
890-2494-2	SS04	106	88
890-2494-3	SS05	96	90
890-2494-4	SS06	105	83
LCS 880-29534/1-A	Lab Control Sample	97	96
LCSD 880-29534/2-A	Lab Control Sample Dup	100	97
MB 880-29534/5-A	Method Blank	98	88

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)
890-2489-A-1-A MS	Matrix Spike	120	110
890-2489-A-1-A MSD	Matrix Spike Duplicate	122	114
890-2494-1	SS03	106	109
890-2494-2	SS04	86	93
890-2494-3	SS05	96	99
890-2494-4	SS06	96	95
LCS 880-28993/2-A	Lab Control Sample	103	100
LCSD 880-28993/3-A	Lab Control Sample Dup	107	102
MB 880-28993/1-A	Method Blank	113	130

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU Big Sinks 29 CTB

Job ID: 890-2494-1
SDG: 03E1558069

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-29534/5-A
Matrix: Solid
Analysis Batch: 29547

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 29534

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/12/22 10:47	07/12/22 14:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/12/22 10:47	07/12/22 14:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/12/22 10:47	07/12/22 14:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/12/22 10:47	07/12/22 14:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/12/22 10:47	07/12/22 14:08	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/12/22 10:47	07/12/22 14:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*07/12/22 10:47*	*07/12/22 14:08*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*07/12/22 10:47*	*07/12/22 14:08*	*1*

Lab Sample ID: LCS 880-29534/1-A
Matrix: Solid
Analysis Batch: 29547

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 29534

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09658		mg/Kg		97	70 - 130		
Toluene			0.100	0.09541		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.09716		mg/Kg		97	70 - 130		
m-Xylene & p-Xylene			0.200	0.1923		mg/Kg		96	70 - 130		
o-Xylene			0.100	0.1095		mg/Kg		110	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 880-29534/2-A
Matrix: Solid
Analysis Batch: 29547

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 29534

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1042		mg/Kg		104	70 - 130	8	35
Toluene			0.100	0.1034		mg/Kg		103	70 - 130	8	35
Ethylbenzene			0.100	0.1065		mg/Kg		107	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.2120		mg/Kg		106	70 - 130	10	35
o-Xylene			0.100	0.1191		mg/Kg		119	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 880-16804-A-1-A MS
Matrix: Solid
Analysis Batch: 29547

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 29534

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.101	0.08517		mg/Kg		84	70 - 130		
Toluene	<0.00199	U F1	0.101	0.08075		mg/Kg		79	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU Big Sinks 29 CTB

Job ID: 890-2494-1
SDG: 03E1558069

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

Lab Sample ID: 880-16804-A-1-A MS
Matrix: Solid
Analysis Batch: 29547

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 29534

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U F1	0.101	0.08049		mg/Kg		78	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.202	0.1614		mg/Kg		78	70 - 130
o-Xylene	<0.00199	U F1	0.101	0.08750		mg/Kg		86	70 - 130

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

Lab Sample ID: 880-16804-A-1-B MSD
Matrix: Solid
Analysis Batch: 29547

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 29534

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.07155		mg/Kg		71	70 - 130	17	35
Toluene	<0.00199	U F1	0.100	0.06601	F1	mg/Kg		65	70 - 130	20	35
Ethylbenzene	<0.00199	U F1	0.100	0.06245	F1	mg/Kg		61	70 - 130	25	35
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1231	F1	mg/Kg		60	70 - 130	27	35
o-Xylene	<0.00199	U F1	0.100	0.06569	F1	mg/Kg		65	70 - 130	28	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

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

Lab Sample ID: MB 880-28993/1-A
Matrix: Solid
Analysis Batch: 29112

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 28993

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	34.41	J	50.0	15.0	mg/Kg		07/05/22 08:59	07/06/22 10:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	15.0	mg/Kg		07/05/22 08:59	07/06/22 10:39	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		07/05/22 08:59	07/06/22 10:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*07/05/22 08:59*	*07/06/22 10:39*	*1*
o-Terphenyl	*130*		*70 - 130*	*07/05/22 08:59*	*07/06/22 10:39*	*1*

Lab Sample ID: LCS 880-28993/2-A
Matrix: Solid
Analysis Batch: 29112

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 28993

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	919.7		mg/Kg		92	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1066		mg/Kg		107	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU Big Sinks 29 CTB

Job ID: 890-2494-1
SDG: 03E1558069

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

Lab Sample ID: LCS 880-28993/2-A
Matrix: Solid
Analysis Batch: 29112

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 28993

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	100		70 - 130

Lab Sample ID: LCSD 880-28993/3-A
Matrix: Solid
Analysis Batch: 29112

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 28993

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	955.0		mg/Kg		95	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1048		mg/Kg		105	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	102		70 - 130

Lab Sample ID: 890-2489-A-1-A MS
Matrix: Solid
Analysis Batch: 29112

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 28993

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	120		70 - 130
o-Terphenyl	110		70 - 130

Lab Sample ID: 890-2489-A-1-A MSD
Matrix: Solid
Analysis Batch: 29112

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 28993

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	114		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-29145/1-A
Matrix: Solid
Analysis Batch: 29314

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			07/10/22 08:52	1

Lab Sample ID: LCS 880-29145/2-A
Matrix: Solid
Analysis Batch: 29314

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	242.6		mg/Kg		97	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: PLU Big Sinks 29 CTB

Job ID: 890-2494-1
SDG: 03E1558069

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-29145/3-A
Matrix: Solid
Analysis Batch: 29314

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	243.2		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 880-16613-A-7-F MS
Matrix: Solid
Analysis Batch: 29314

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	437		249	686.9		mg/Kg		101	90 - 110		

Lab Sample ID: 880-16613-A-7-G MSD
Matrix: Solid
Analysis Batch: 29314

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	437		249	693.9		mg/Kg		103	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: PLU Big Sinks 29 CTB

Job ID: 890-2494-1
SDG: 03E1558069

GC VOA

Prep Batch: 29534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2494-1	SS03	Total/NA	Solid	5035	
890-2494-2	SS04	Total/NA	Solid	5035	
890-2494-3	SS05	Total/NA	Solid	5035	
890-2494-4	SS06	Total/NA	Solid	5035	
MB 880-29534/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-29534/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-29534/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-16804-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-16804-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 29547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2494-1	SS03	Total/NA	Solid	8021B	29534
890-2494-2	SS04	Total/NA	Solid	8021B	29534
890-2494-3	SS05	Total/NA	Solid	8021B	29534
890-2494-4	SS06	Total/NA	Solid	8021B	29534
MB 880-29534/5-A	Method Blank	Total/NA	Solid	8021B	29534
LCS 880-29534/1-A	Lab Control Sample	Total/NA	Solid	8021B	29534
LCSD 880-29534/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	29534
880-16804-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	29534
880-16804-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	29534

Analysis Batch: 29637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2494-1	SS03	Total/NA	Solid	Total BTEX	
890-2494-2	SS04	Total/NA	Solid	Total BTEX	
890-2494-3	SS05	Total/NA	Solid	Total BTEX	
890-2494-4	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 28993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2494-1	SS03	Total/NA	Solid	8015NM Prep	
890-2494-2	SS04	Total/NA	Solid	8015NM Prep	
890-2494-3	SS05	Total/NA	Solid	8015NM Prep	
890-2494-4	SS06	Total/NA	Solid	8015NM Prep	
MB 880-28993/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-28993/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-28993/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2489-A-1-A MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2489-A-1-A MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 29112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2494-1	SS03	Total/NA	Solid	8015B NM	28993
890-2494-2	SS04	Total/NA	Solid	8015B NM	28993
890-2494-3	SS05	Total/NA	Solid	8015B NM	28993
890-2494-4	SS06	Total/NA	Solid	8015B NM	28993
MB 880-28993/1-A	Method Blank	Total/NA	Solid	8015B NM	28993
LCS 880-28993/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	28993

QC Association Summary

Client: Ensolum
Project/Site: PLU Big Sinks 29 CTB

Job ID: 890-2494-1
SDG: 03E1558069

GC Semi VOA (Continued)

Analysis Batch: 29112 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-28993/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	28993
890-2489-A-1-A MS	Matrix Spike	Total/NA	Solid	8015B NM	28993
890-2489-A-1-A MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	28993

Analysis Batch: 29175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2494-1	SS03	Total/NA	Solid	8015 NM	
890-2494-2	SS04	Total/NA	Solid	8015 NM	
890-2494-3	SS05	Total/NA	Solid	8015 NM	
890-2494-4	SS06	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 29145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2494-1	SS03	Soluble	Solid	DI Leach	
890-2494-2	SS04	Soluble	Solid	DI Leach	
890-2494-3	SS05	Soluble	Solid	DI Leach	
890-2494-4	SS06	Soluble	Solid	DI Leach	
MB 880-29145/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-29145/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-29145/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-16613-A-7-F MS	Matrix Spike	Soluble	Solid	DI Leach	
880-16613-A-7-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 29314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2494-1	SS03	Soluble	Solid	300.0	29145
890-2494-2	SS04	Soluble	Solid	300.0	29145
890-2494-3	SS05	Soluble	Solid	300.0	29145
890-2494-4	SS06	Soluble	Solid	300.0	29145
MB 880-29145/1-A	Method Blank	Soluble	Solid	300.0	29145
LCS 880-29145/2-A	Lab Control Sample	Soluble	Solid	300.0	29145
LCSD 880-29145/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	29145
880-16613-A-7-F MS	Matrix Spike	Soluble	Solid	300.0	29145
880-16613-A-7-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	29145

Lab Chronicle

Client: Ensolum
Project/Site: PLU Big Sinks 29 CTB

Job ID: 890-2494-1
SDG: 03E1558069

Client Sample ID: SS03
Date Collected: 06/30/22 13:50
Date Received: 07/01/22 09:19

Lab Sample ID: 890-2494-1
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	29534	07/12/22 10:47	EL	XEN MID
Total/NA	Analysis	8021B		1	5 g	5 mL	29547	07/12/22 18:57	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29637	07/13/22 10:38	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29175	07/07/22 09:01	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	28993	07/05/22 08:59	AM	XEN MID
Total/NA	Analysis	8015B NM		1			29112	07/06/22 13:35	SM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	29145	07/06/22 12:37	SMC	XEN MID
Soluble	Analysis	300.0		1			29314	07/10/22 12:06	CH	XEN MID

Client Sample ID: SS04
Date Collected: 06/30/22 14:00
Date Received: 07/01/22 09:19

Lab Sample ID: 890-2494-2
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			5.05 g	5 mL	29534	07/12/22 10:47	EL	XEN MID
Total/NA	Analysis	8021B		1	5 g	5 mL	29547	07/12/22 19:18	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29637	07/13/22 10:38	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29175	07/07/22 09:01	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	28993	07/05/22 08:59	AM	XEN MID
Total/NA	Analysis	8015B NM		1			29112	07/06/22 13:57	SM	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	29145	07/06/22 12:37	SMC	XEN MID
Soluble	Analysis	300.0		1			29314	07/11/22 13:40	CH	XEN MID

Client Sample ID: SS05
Date Collected: 06/30/22 14:05
Date Received: 07/01/22 09:19

Lab Sample ID: 890-2494-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	29534	07/12/22 10:47	EL	XEN MID
Total/NA	Analysis	8021B		1	5 g	5 mL	29547	07/12/22 19:38	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29637	07/13/22 10:38	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29175	07/07/22 09:01	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	28993	07/05/22 08:59	AM	XEN MID
Total/NA	Analysis	8015B NM		1			29112	07/06/22 14:19	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	29145	07/06/22 12:37	SMC	XEN MID
Soluble	Analysis	300.0		1			29314	07/11/22 13:49	CH	XEN MID

Client Sample ID: SS06
Date Collected: 06/30/22 14:10
Date Received: 07/01/22 09:19

Lab Sample ID: 890-2494-4
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	29534	07/12/22 10:47	EL	XEN MID
Total/NA	Analysis	8021B		1	5 g	5 mL	29547	07/12/22 19:59	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29637	07/13/22 10:38	SM	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU Big Sinks 29 CTB

Job ID: 890-2494-1
SDG: 03E1558069

Client Sample ID: SS06

Date Collected: 06/30/22 14:10
Date Received: 07/01/22 09:19

Lab Sample ID: 890-2494-4

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			29175	07/07/22 09:01	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	28993	07/05/22 08:59	AM	XEN MID
Total/NA	Analysis	8015B NM		1			29112	07/06/22 14:41	SM	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	29145	07/06/22 12:37	SMC	XEN MID
Soluble	Analysis	300.0		1			29314	07/10/22 12:52	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU Big Sinks 29 CTB

Job ID: 890-2494-1
SDG: 03E1558069

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: PLU Big Sinks 29 CTB

Job ID: 890-2494-1
SDG: 03E1558069

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

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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:

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

Sample Summary

Client: Ensolum
Project/Site: PLU Big Sinks 29 CTB

Job ID: 890-2494-1
SDG: 03E1558069

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2494-1	SS03	Solid	06/30/22 13:50	07/01/22 09:19	0.5
890-2494-2	SS04	Solid	06/30/22 14:00	07/01/22 09:19	0.5
890-2494-3	SS05	Solid	06/30/22 14:05	07/01/22 09:19	0.5
890-2494-4	SS06	Solid	06/30/22 14:10	07/01/22 09:19	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: _____

www.xenco.com Page ____ of ____

Project Manager:	Tacoma Morrissey	Bill to: (if different)	
Company Name:	Ensolum	Company Name:	
Address:	3122 Natl Parks Hwy	Address:	
City, State ZIP:	Carlsbad NM 88220	City, State ZIP:	
Phone:	337257D709	Email:	tmorrissey@ensolum.com

Work Order Comments

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

Project Name:	PW Big Sinks 29 CTB	Turn Around	
Project Number:	03E1558069	☑ Routine ☐ Rush	
Project Location:	Eddy County NM	Due Date:	
Sampler's Name:	GL Chin	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	NA		

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM-007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.8
Total Containers:		Corrected Temperature:	5.6

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	Parameters: BTEX	Chloride	TPH	Sample Comments
SS03	S	6/30	1350	0.5	G	1					
SS04			1400								
SS05			1405								
SS06			1410								

890-2494 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

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		Amanda Sutton	7/1/22 906	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220
Phone. 575-988-3199 Fax 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-827 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 - Louisiana, NELAP - Texas		Job #: 890-2494-1
Address: 1211 W Florida Ave	Due Date Requested: 7/8/2022			
City: Midland	TAT Requested (days):			
State Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: plu big sinks 29 ctb	Project #: 88000022			
Site	SSOW#:			

Analysis Requested

Preservation Codes

A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M - Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total_BTEX_GCV	8015MOD_Calc	Total Number of containers	Special Instructions/Note:
Preservation Code:													
ss03 (890-2494-1)	6/30/22	13 50 Mountain		Solid			X	X	X	X	X	1	
ss04 (890-2494-2)	6/30/22	14 00 Mountain		Solid			X	X	X	X	X	1	
ss05 (890-2494-3)	6/30/22	14 05 Mountain		Solid			X	X	X	X	X	1	
ss06 (890-2494-4)	6/30/22	14 10 Mountain		Solid			X	X	X	X	X	1	

Note Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon out 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 complicance to Eurofins Environment Testing South Central LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by: Clw			Received by: JKramer	Date/Time: 7/2/22 906	
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 3.8/3.6

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2494-1
SDG Number: 03E1558069

Login Number: 2494
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.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2494-1
SDG Number: 03E1558069

Login Number: 2494
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 07/05/22 09:17 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

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2496-1
Laboratory Sample Delivery Group: 03E1558069
Client Project/Site: PLU BIG SINKS 29 CTB

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
7/12/2022 4:23:01 PM

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: PLU BIG SINKS 29 CTB

Laboratory Job ID: 890-2496-1
SDG: 03E1558069

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2496-1
Project/Site: PLU BIG SINKS 29 CTB SDG: 03E1558069

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
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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: PLU BIG SINKS 29 CTB

Job ID: 890-2496-1
SDG: 03E1558069

Job ID: 890-2496-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2496-1

Receipt
The samples were received on 7/1/2022 9:06 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 5.6°C

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: SS02 (890-2496-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-29058 and analytical batch 880-29100 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.

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: PLU BIG SINKS 29 CTB

Job ID: 890-2496-1
SDG: 03E1558069

Client Sample ID: SS01

Lab Sample ID: 890-2496-1
Matrix: Solid
Date Collected: 06/30/22 13:30
Date Received: 07/01/22 09:06
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000397	U	0.000397		mg/Kg		07/11/22 11:47	07/12/22 11:18	1
Toluene	<0.000397	U	0.000397		mg/Kg		07/11/22 11:47	07/12/22 11:18	1
Ethylbenzene	**0.000457**		0.000397		mg/Kg		07/11/22 11:47	07/12/22 11:18	1
m-Xylene & p-Xylene	**0.0365**		0.000794		mg/Kg		07/11/22 11:47	07/12/22 11:18	1
o-Xylene	**0.0131**		0.000397		mg/Kg		07/11/22 11:47	07/12/22 11:18	1
Xylenes, Total	**0.0496**		0.000794		mg/Kg		07/11/22 11:47	07/12/22 11:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*07/11/22 11:47*	*07/12/22 11:18*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*07/11/22 11:47*	*07/12/22 11:18*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0501**		0.000794		mg/Kg			07/12/22 15:02	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**11100**		249		mg/Kg			07/07/22 12:40	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**1250**	***+**	49.9		mg/Kg		07/05/22 14:40	07/06/22 02:31	1
Diesel Range Organics (Over C10-C28)	**9860**		249		mg/Kg		07/05/22 14:40	07/06/22 07:18	5
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/05/22 14:40	07/06/22 02:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*147*	*S1+*	*70 - 130*	*07/05/22 14:40*	*07/06/22 02:31*	*1*
1-Chlorooctane	*145*	*S1+*	*70 - 130*	*07/05/22 14:40*	*07/06/22 07:18*	*5*
o-Terphenyl	*256*	*S1+*	*70 - 130*	*07/05/22 14:40*	*07/06/22 02:31*	*1*
o-Terphenyl	*267*	*S1+*	*70 - 130*	*07/05/22 14:40*	*07/06/22 07:18*	*5*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.54**		4.95		mg/Kg			07/08/22 12:15	1

Client Sample ID: SS02

Lab Sample ID: 890-2496-2
Matrix: Solid
Date Collected: 06/30/22 13:45
Date Received: 07/01/22 09:06
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.101	U	0.101		mg/Kg		07/11/22 11:47	07/12/22 15:56	50
Toluene	<0.101	U	0.101		mg/Kg		07/11/22 11:47	07/12/22 15:56	50
Ethylbenzene	<0.101	U	0.101		mg/Kg		07/11/22 11:47	07/12/22 15:56	50
m-Xylene & p-Xylene	**1.13**		0.202		mg/Kg		07/11/22 11:47	07/12/22 15:56	50
o-Xylene	**0.345**		0.101		mg/Kg		07/11/22 11:47	07/12/22 15:56	50
Xylenes, Total	**1.48**		0.202		mg/Kg		07/11/22 11:47	07/12/22 15:56	50

Client Sample Results

Client: Ensolum
Project/Site: PLU BIG SINKS 29 CTB

Job ID: 890-2496-1
SDG: 03E1558069

Client Sample ID: SS02
Date Collected: 06/30/22 13:45
Date Received: 07/01/22 09:06
Sample Depth: 0.5

Lab Sample ID: 890-2496-2
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130	07/11/22 11:47	07/12/22 15:56	50
1,4-Difluorobenzene (Surr)	67	S1-	70 - 130	07/11/22 11:47	07/12/22 15:56	50

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	1.48		0.202	mg/Kg			07/12/22 15:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	15700		250	mg/Kg			07/07/22 12:40	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	364	*+	250	mg/Kg		07/05/22 14:40	07/06/22 02:53	5
Diesel Range Organics (Over C10-C28)	15300		250	mg/Kg		07/05/22 14:40	07/06/22 02:53	5
OII Range Organics (Over C28-C36)	<250	U	250	mg/Kg		07/05/22 14:40	07/06/22 02:53	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	66	S1-	70 - 130	07/05/22 14:40	07/06/22 02:53	5
o-Terphenyl	323	S1+	70 - 130	07/05/22 14:40	07/06/22 02:53	5

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	187		4.99	mg/Kg			07/08/22 18:33	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU BIG SINKS 29 CTB

Job ID: 890-2496-1
SDG: 03E1558069

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)
890-2491-A-3-E MS	Matrix Spike	121	84
890-2491-A-3-F MSD	Matrix Spike Duplicate	114	82
890-2496-1	SS01	101	76
890-2496-2	SS02	129	67 S1-
LCS 880-29434/1-A	Lab Control Sample	120	89
LCSD 880-29434/2-A	Lab Control Sample Dup	125	85
MB 880-29368/5-A	Method Blank	81	80
MB 880-29434/5-A	Method Blank	86	79

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)
890-2490-A-21-H MS	Matrix Spike	107	111
890-2490-A-21-I MSD	Matrix Spike Duplicate	107	110
890-2496-1	SS01	145 S1+	267 S1+
890-2496-1	SS01	147 S1+	256 S1+
890-2496-2	SS02	66 S1-	323 S1+
LCS 880-29058/2-A	Lab Control Sample	92	94
LCSD 880-29058/3-A	Lab Control Sample Dup	95	101
MB 880-29058/1-A	Method Blank	109	121

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU BIG SINKS 29 CTB

Job ID: 890-2496-1
SDG: 03E1558069

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-29368/5-A
Matrix: Solid
Analysis Batch: 29380

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 29368

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/10/22 14:09	07/11/22 11:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/10/22 14:09	07/11/22 11:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/10/22 14:09	07/11/22 11:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/10/22 14:09	07/11/22 11:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/10/22 14:09	07/11/22 11:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/10/22 14:09	07/11/22 11:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*07/10/22 14:09*	*07/11/22 11:51*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*07/10/22 14:09*	*07/11/22 11:51*	*1*

Lab Sample ID: MB 880-29434/5-A
Matrix: Solid
Analysis Batch: 29380

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 29434

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/11/22 11:47	07/12/22 03:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/22 11:47	07/12/22 03:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/22 11:47	07/12/22 03:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/11/22 11:47	07/12/22 03:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/22 11:47	07/12/22 03:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/11/22 11:47	07/12/22 03:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*07/11/22 11:47*	*07/12/22 03:37*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*07/11/22 11:47*	*07/12/22 03:37*	*1*

Lab Sample ID: LCS 880-29434/1-A
Matrix: Solid
Analysis Batch: 29380

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 29434

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08859		mg/Kg		89	70 - 130		
Toluene			0.100	0.09338		mg/Kg		93	70 - 130		
Ethylbenzene			0.100	0.09925		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.1974		mg/Kg		99	70 - 130		
o-Xylene			0.100	0.1160		mg/Kg		116	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: LCSD 880-29434/2-A
Matrix: Solid
Analysis Batch: 29380

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 29434

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08556		mg/Kg		86	70 - 130	3	35

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU BIG SINKS 29 CTB

Job ID: 890-2496-1
SDG: 03E1558069

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

Lab Sample ID: LCSD 880-29434/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 29380 — **Prep Batch: 29434**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09204		mg/Kg		92	70 - 130	1	35
Ethylbenzene			0.100	0.09312		mg/Kg		93	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1907		mg/Kg		95	70 - 130	3	35
o-Xylene			0.100	0.1058		mg/Kg		106	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*

Lab Sample ID: 890-2491-A-3-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 29380 — **Prep Batch: 29434**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.101	0.08093		mg/Kg		80	70 - 130
Toluene	<0.00200	U	0.101	0.08986		mg/Kg		89	70 - 130
Ethylbenzene	<0.00200	U	0.101	0.09249		mg/Kg		92	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.202	0.1874		mg/Kg		93	70 - 130
o-Xylene	<0.00200	U	0.101	0.1022		mg/Kg		101	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*

Lab Sample ID: 890-2491-A-3-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 29380 — **Prep Batch: 29434**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.08202		mg/Kg		82	70 - 130	1	35
Toluene	<0.00200	U	0.100	0.08618		mg/Kg		86	70 - 130	4	35
Ethylbenzene	<0.00200	U	0.100	0.09013		mg/Kg		90	70 - 130	3	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1843		mg/Kg		92	70 - 130	2	35
o-Xylene	<0.00200	U	0.100	0.09839		mg/Kg		98	70 - 130	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*

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

Lab Sample ID: MB 880-29058/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 29100 — **Prep Batch: 29058**

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		07/05/22 14:40	07/05/22 17:50	1

QC Sample Results

Client: Ensolum
Project/Site: PLU BIG SINKS 29 CTB

Job ID: 890-2496-1
SDG: 03E1558069

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

Lab Sample ID: MB 880-29058/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 29100 — **Prep Batch: 29058**

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		07/05/22 14:40	07/05/22 17:50	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/05/22 14:40	07/05/22 17:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*07/05/22 14:40*	*07/05/22 17:50*	*1*
o-Terphenyl	*121*		*70 - 130*	*07/05/22 14:40*	*07/05/22 17:50*	*1*

Lab Sample ID: LCS 880-29058/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 29100 — **Prep Batch: 29058**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1526	*+	mg/Kg		153	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	943.8		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*94*		*70 - 130*

Lab Sample ID: LCSD 880-29058/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 29100 — **Prep Batch: 29058**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1390	*+	mg/Kg		139	70 - 130	9	20
Diesel Range Organics (Over C10-C28)			1000	1055		mg/Kg		106	70 - 130	11	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*101*		*70 - 130*

Lab Sample ID: 890-2490-A-21-H MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 29100 — **Prep Batch: 29058**

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 *+	997	1104		mg/Kg		111	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	997	932.4		mg/Kg		94	70 - 130		

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

QC Sample Results

Client: Ensolum
Project/Site: PLU BIG SINKS 29 CTB

Job ID: 890-2496-1
SDG: 03E1558069

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

Lab Sample ID: 890-2490-A-21-I MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 29100 — **Prep Batch: 29058**

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 *+	998	1093		mg/Kg		110	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	926.4		mg/Kg		93	70 - 130	1	20

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-28997/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 29213

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/08/22 07:48	1

Lab Sample ID: LCS 880-28997/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 29213

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	243.8		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-28997/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 29213

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	244.3		mg/Kg		98	90 - 110	0	20

Lab Sample ID: 890-2491-A-4-F MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 29213

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	35.6		253	314.4		mg/Kg		110	90 - 110		

Lab Sample ID: 890-2491-A-4-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 29213

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	35.6		253	304.1		mg/Kg		106	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: PLU BIG SINKS 29 CTB

Job ID: 890-2496-1
SDG: 03E1558069

GC VOA

Prep Batch: 29368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-29368/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 29380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2496-1	SS01	Total/NA	Solid	8021B	29434
890-2496-2	SS02	Total/NA	Solid	8021B	29434
MB 880-29368/5-A	Method Blank	Total/NA	Solid	8021B	29368
MB 880-29434/5-A	Method Blank	Total/NA	Solid	8021B	29434
LCS 880-29434/1-A	Lab Control Sample	Total/NA	Solid	8021B	29434
LCSD 880-29434/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	29434
890-2491-A-3-E MS	Matrix Spike	Total/NA	Solid	8021B	29434
890-2491-A-3-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	29434

Prep Batch: 29434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2496-1	SS01	Total/NA	Solid	5035	
890-2496-2	SS02	Total/NA	Solid	5035	
MB 880-29434/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-29434/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-29434/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2491-A-3-E MS	Matrix Spike	Total/NA	Solid	5035	
890-2491-A-3-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 29561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2496-1	SS01	Total/NA	Solid	Total BTEX	
890-2496-2	SS02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 29058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2496-1	SS01	Total/NA	Solid	8015NM Prep	
890-2496-2	SS02	Total/NA	Solid	8015NM Prep	
MB 880-29058/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-29058/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-29058/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2490-A-21-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2490-A-21-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 29100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2496-1	SS01	Total/NA	Solid	8015B NM	29058
890-2496-1	SS01	Total/NA	Solid	8015B NM	29058
890-2496-2	SS02	Total/NA	Solid	8015B NM	29058
MB 880-29058/1-A	Method Blank	Total/NA	Solid	8015B NM	29058
LCS 880-29058/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	29058
LCSD 880-29058/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	29058
890-2490-A-21-H MS	Matrix Spike	Total/NA	Solid	8015B NM	29058
890-2490-A-21-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	29058

QC Association Summary

Client: Ensolum
Project/Site: PLU BIG SINKS 29 CTB

Job ID: 890-2496-1
SDG: 03E1558069

GC Semi VOA

Analysis Batch: 29207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2496-1	SS01	Total/NA	Solid	8015 NM	
890-2496-2	SS02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 28997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2496-1	SS01	Soluble	Solid	DI Leach	
890-2496-2	SS02	Soluble	Solid	DI Leach	
MB 880-28997/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-28997/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-28997/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2491-A-4-F MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2491-A-4-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 29213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2496-1	SS01	Soluble	Solid	300.0	28997
890-2496-2	SS02	Soluble	Solid	300.0	28997
MB 880-28997/1-A	Method Blank	Soluble	Solid	300.0	28997
LCS 880-28997/2-A	Lab Control Sample	Soluble	Solid	300.0	28997
LCSD 880-28997/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	28997
890-2491-A-4-F MS	Matrix Spike	Soluble	Solid	300.0	28997
890-2491-A-4-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	28997

Lab Chronicle

Client: Ensolum
Project/Site: PLU BIG SINKS 29 CTB

Job ID: 890-2496-1
SDG: 03E1558069

Client Sample ID: SS01

Date Collected: 06/30/22 13:30
Date Received: 07/01/22 09:06

Lab Sample ID: 890-2496-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	29434	07/11/22 11:47	EL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	1.0 mL	29380	07/12/22 11:18	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29561	07/12/22 15:02	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29207	07/07/22 12:40	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	29058	07/05/22 14:40	AM	XEN MID
Total/NA	Analysis	8015B NM		1			29100	07/06/22 02:31	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	29058	07/05/22 14:40	AM	XEN MID
Total/NA	Analysis	8015B NM		5			29100	07/06/22 07:18	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	28997	07/05/22 09:12	CH	XEN MID
Soluble	Analysis	300.0		1			29213	07/08/22 12:15	CH	XEN MID

Client Sample ID: SS02

Date Collected: 06/30/22 13:45
Date Received: 07/01/22 09:06

Lab Sample ID: 890-2496-2

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			4.96 g	5 mL	29434	07/11/22 11:47	EL	XEN MID
Total/NA	Analysis	8021B		50			29380	07/12/22 15:56	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			29561	07/12/22 15:02	SM	XEN MID
Total/NA	Analysis	8015 NM		1			29207	07/07/22 12:40	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	29058	07/05/22 14:40	AM	XEN MID
Total/NA	Analysis	8015B NM		5			29100	07/06/22 02:53	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	28997	07/05/22 09:12	CH	XEN MID
Soluble	Analysis	300.0		1			29213	07/08/22 18:33	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU BIG SINKS 29 CTB

Job ID: 890-2496-1
SDG: 03E1558069

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: PLU BIG SINKS 29 CTB

Job ID: 890-2496-1
SDG: 03E1558069

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

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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:

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

Sample Summary

Client: Ensolum
Project/Site: PLU BIG SINKS 29 CTB

Job ID: 890-2496-1
SDG: 03E1558069

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2496-1	SS01	Solid	06/30/22 13:30	07/01/22 09:06	0.5
890-2496-2	SS02	Solid	06/30/22 13:45	07/01/22 09:06	0.5

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: _____

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Project Manager:	Takoma Morrissey	Bill to: (if different)	
Company Name:	Ensolum	Company Name:	
Address:	3122 Natl. Parks Hwy	Address:	
City, State ZIP:	Carlsbad NM 88220	City, State ZIP:	
Phone:	337-257-8307	Email:	tmorrissey@ensolum.com

Work Order Comments

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

Project Name:	PLU Big Sinks 29 CTB	Turn Around	
Project Number:	03E1558069	☑ Routine ☐ Rush	
Project Location:	Eddy County NM	Due Date:	
Sampler's Name:	LR Chew	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	N/A		

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TNM 007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.8
Total Containers:		Corrected Temperature:	5.6

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters		
								4oH	Chloride	BTEX
SS01	S	6/30	1330	0.5	G	1				
SS02	S	6/30	1345	0.5	G	1				

890-2496 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

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	Amanda Stat	7/1/22 906	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Carlsbad
1089 N Canal St
Carlsbad NM 88220
Phone 575-988-3199 Fax 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-827 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 - Louisiana, NELAP - Texas		Job #: 890-2496-1
Address: 1211 W Florida Ave	Due Date Requested: 7/8/2022			
City: Midland	TAT Requested (days)			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: PLU BIG SINKS 29 CTB	Project #: 88000022			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S - H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total_BTEX_GCV	8015MOD_Calc	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
SS01 (890-2496-1)	6/30/22	13 30 Mountain		Solid			X	X	X	X	X	1	
SS02 (890-2496-2)	6/30/22	13 45 Mountain		Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method analyte & accreditation compliance upon out 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 complicance to Eurofins Environment Testing South Central LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	Relinquished by: Cle			Received by: KRAMER	Date/Time: 7/7/22 900	
	Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 3.0/3.6

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2496-1
SDG Number: 03E1558069

Login Number: 2496
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.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2496-1
SDG Number: 03E1558069

Login Number: 2496
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 07/05/22 09:17 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

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2665-1
Laboratory Sample Delivery Group: 03E1558069
Client Project/Site: PLU BIG SINK 29 CTB
Revision: 1

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
8/8/2022 1:49:57 PM

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Laboratory Job ID: 890-2665-1
SDG: 03E1558069

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

Qualifiers

GC VOA

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

GC Semi VOA

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

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: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

Job ID: 890-2665-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2665-1

REVISION

The report being provided is a revision of the original report sent on 8/3/2022. The report (revision 1) is being revised due to Per client email, requesting re run.

Report revision history

Receipt
The samples were received on 7/27/2022 4:41 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C

GC VOA
Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-31011 and analytical batch 880-30959 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 laboratory control sample (LCS) associated with preparation batch 880-30992 and analytical batch 880-31051 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) recoveries for preparation batch 880-31438 and analytical batch 880-31455 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-31438 and analytical batch 880-31455 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-31438/2-A) and (890-2702-A-1-B MS). 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: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

Client Sample ID: FS01
Date Collected: 07/26/22 08:40
Date Received: 07/27/22 16:41
Sample Depth: 1.5

Lab Sample ID: 890-2665-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U *-	0.00202		mg/Kg		07/29/22 13:17	07/30/22 02:06	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/29/22 13:17	07/30/22 02:06	1
Ethylbenzene	<0.00202	U *-	0.00202		mg/Kg		07/29/22 13:17	07/30/22 02:06	1
m-Xylene & p-Xylene	<0.00404	U *-	0.00404		mg/Kg		07/29/22 13:17	07/30/22 02:06	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/29/22 13:17	07/30/22 02:06	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		07/29/22 13:17	07/30/22 02:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*07/29/22 13:17*	*07/30/22 02:06*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*07/29/22 13:17*	*07/30/22 02:06*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			07/30/22 18:57	1

Method: 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			07/31/22 10:27	1

Method: 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		07/29/22 11:03	07/30/22 12:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		07/29/22 11:03	07/30/22 12:37	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/29/22 11:03	07/30/22 12:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*07/29/22 11:03*	*07/30/22 12:37*	*1*
o-Terphenyl	*120*		*70 - 130*	*07/29/22 11:03*	*07/30/22 12:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**15.0**		5.03		mg/Kg			08/03/22 06:09	1

Client Sample ID: FS02
Date Collected: 07/26/22 11:00
Date Received: 07/27/22 16:41
Sample Depth: 1.5

Lab Sample ID: 890-2665-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *-	0.00199		mg/Kg		07/29/22 13:17	07/30/22 02:26	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/29/22 13:17	07/30/22 02:26	1
Ethylbenzene	<0.00199	U *-	0.00199		mg/Kg		07/29/22 13:17	07/30/22 02:26	1
m-Xylene & p-Xylene	**0.0108**	***-**	0.00398		mg/Kg		07/29/22 13:17	07/30/22 02:26	1
o-Xylene	**0.00485**		0.00199		mg/Kg		07/29/22 13:17	07/30/22 02:26	1
Xylenes, Total	**0.0157**		0.00398		mg/Kg		07/29/22 13:17	07/30/22 02:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*07/29/22 13:17*	*07/30/22 02:26*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

Client Sample ID: FS02

Date Collected: 07/26/22 11:00
Date Received: 07/27/22 16:41
Sample Depth: 1.5

Lab Sample ID: 890-2665-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*07/29/22 13:17*	*07/30/22 02:26*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0157**		0.00398	mg/Kg			07/30/22 18:57	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**65.5**		50.0	mg/Kg			07/31/22 10:27	1

Method: 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		08/03/22 15:09	08/05/22 04:36	1
Diesel Range Organics (Over C10-C28)	**65.5**		50.0	mg/Kg		08/03/22 15:09	08/05/22 04:36	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/22 15:09	08/05/22 04:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*08/03/22 15:09*	*08/05/22 04:36*	*1*
o-Terphenyl	*98*		*70 - 130*	*08/03/22 15:09*	*08/05/22 04:36*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**70.3**		5.03	mg/Kg			08/03/22 06:17	1

Client Sample ID: FS03

Date Collected: 07/27/22 08:40
Date Received: 07/27/22 16:41
Sample Depth: 1.5

Lab Sample ID: 890-2665-3

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *-	0.00200	mg/Kg		07/29/22 13:17	07/30/22 02:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/29/22 13:17	07/30/22 02:46	1
Ethylbenzene	<0.00200	U *-	0.00200	mg/Kg		07/29/22 13:17	07/30/22 02:46	1
m-Xylene & p-Xylene	<0.00399	U *-	0.00399	mg/Kg		07/29/22 13:17	07/30/22 02:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/29/22 13:17	07/30/22 02:46	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/29/22 13:17	07/30/22 02:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*07/29/22 13:17*	*07/30/22 02:46*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*07/29/22 13:17*	*07/30/22 02:46*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/30/22 18:57	1

Method: 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			07/31/22 10:27	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

Client Sample ID: FS03

Date Collected: 07/27/22 08:40
Date Received: 07/27/22 16:41
Sample Depth: 1.5

Lab Sample ID: 890-2665-3
Matrix: Solid

Method: 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		07/29/22 11:03	07/30/22 13:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		07/29/22 11:03	07/30/22 13:21	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/29/22 11:03	07/30/22 13:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*07/29/22 11:03*	*07/30/22 13:21*	*1*
o-Terphenyl	*115*		*70 - 130*	*07/29/22 11:03*	*07/30/22 13:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**36.1**		4.99		mg/Kg			08/03/22 06:24	1

Client Sample ID: FS04

Date Collected: 07/27/22 08:45
Date Received: 07/27/22 16:41
Sample Depth: 1.5

Lab Sample ID: 890-2665-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U *-	0.00198		mg/Kg		07/29/22 13:17	07/30/22 03:07	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/29/22 13:17	07/30/22 03:07	1
Ethylbenzene	<0.00198	U *-	0.00198		mg/Kg		07/29/22 13:17	07/30/22 03:07	1
m-Xylene & p-Xylene	<0.00396	U *-	0.00396		mg/Kg		07/29/22 13:17	07/30/22 03:07	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/29/22 13:17	07/30/22 03:07	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/29/22 13:17	07/30/22 03:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*07/29/22 13:17*	*07/30/22 03:07*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*07/29/22 13:17*	*07/30/22 03:07*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/30/22 18:57	1

Method: 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			07/31/22 10:27	1

Method: 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		07/29/22 11:03	07/30/22 13:42	1
Diesel Range Organics (Over C10-C28)	<49.8	U *+	49.8		mg/Kg		07/29/22 11:03	07/30/22 13:42	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/29/22 11:03	07/30/22 13:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*07/29/22 11:03*	*07/30/22 13:42*	*1*
o-Terphenyl	*117*		*70 - 130*	*07/29/22 11:03*	*07/30/22 13:42*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

Client Sample ID: FS04

Date Collected: 07/27/22 08:45
Date Received: 07/27/22 16:41
Sample Depth: 1.5

Lab Sample ID: 890-2665-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.3		5.01		mg/Kg			08/03/22 06:32	1

Client Sample ID: FS05

Date Collected: 07/27/22 11:15
Date Received: 07/27/22 16:41
Sample Depth: 1.5

Lab Sample ID: 890-2665-5
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *-	0.00200		mg/Kg		07/29/22 13:17	07/30/22 03:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:17	07/30/22 03:27	1
Ethylbenzene	<0.00200	U *-	0.00200		mg/Kg		07/29/22 13:17	07/30/22 03:27	1
m-Xylene & p-Xylene	<0.00400	U *-	0.00400		mg/Kg		07/29/22 13:17	07/30/22 03:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:17	07/30/22 03:27	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/29/22 13:17	07/30/22 03:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*07/29/22 13:17*	*07/30/22 03:27*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*07/29/22 13:17*	*07/30/22 03:27*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			07/30/22 18:57	1

Method: 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			07/31/22 10:27	1

Method: 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		07/29/22 11:03	07/30/22 14:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		07/29/22 11:03	07/30/22 14:04	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/29/22 11:03	07/30/22 14:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*07/29/22 11:03*	*07/30/22 14:04*	*1*
o-Terphenyl	*117*		*70 - 130*	*07/29/22 11:03*	*07/30/22 14:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25.8		5.04		mg/Kg			08/03/22 06:40	1

Client Sample Results

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

Client Sample ID: FS06

Date Collected: 07/27/22 12:15
Date Received: 07/27/22 16:41
Sample Depth: 1.5

Lab Sample ID: 890-2665-6

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U *-	0.00198		mg/Kg		07/29/22 13:17	07/30/22 03:48	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/29/22 13:17	07/30/22 03:48	1
Ethylbenzene	<0.00198	U *-	0.00198		mg/Kg		07/29/22 13:17	07/30/22 03:48	1
m-Xylene & p-Xylene	<0.00397	U *-	0.00397		mg/Kg		07/29/22 13:17	07/30/22 03:48	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/29/22 13:17	07/30/22 03:48	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		07/29/22 13:17	07/30/22 03:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*07/29/22 13:17*	*07/30/22 03:48*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*07/29/22 13:17*	*07/30/22 03:48*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			07/30/22 18:57	1

Method: 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			07/31/22 10:27	1

Method: 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		07/29/22 11:03	07/30/22 14:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		07/29/22 11:03	07/30/22 14:25	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/29/22 11:03	07/30/22 14:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*07/29/22 11:03*	*07/30/22 14:25*	*1*
o-Terphenyl	*122*		*70 - 130*	*07/29/22 11:03*	*07/30/22 14:25*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14.9**		4.99		mg/Kg			08/03/22 06:48	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

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)
890-2665-1	FS01	109	101
890-2665-1 MS	FS01	104	100
890-2665-1 MSD	FS01	103	103
890-2665-2	FS02	104	97
890-2665-3	FS03	112	106
890-2665-4	FS04	111	99
890-2665-5	FS05	103	99
890-2665-6	FS06	101	99
LCS 880-31011/1-A	Lab Control Sample	104	97
LCSD 880-31011/2-A	Lab Control Sample Dup	104	99
MB 880-30988/5-A	Method Blank	95	101
MB 880-31011/5-A	Method Blank	96	101

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)
890-2663-A-1-B MS	Matrix Spike	81	93
890-2663-A-1-C MSD	Matrix Spike Duplicate	85	98
890-2665-1	FS01	100	120
890-2665-2	FS02	83	98
890-2665-3	FS03	93	115
890-2665-4	FS04	92	117
890-2665-5	FS05	98	117
890-2665-6	FS06	103	122
890-2702-A-1-B MS	Matrix Spike	67 S1-	76
890-2702-A-1-C MSD	Matrix Spike Duplicate	79	88
LCS 880-30992/2-A	Lab Control Sample	115	110
LCS 880-31438/2-A	Lab Control Sample	124	131 S1+
LCSD 880-30992/3-A	Lab Control Sample Dup	118	117
LCSD 880-31438/3-A	Lab Control Sample Dup	121	129
MB 880-30992/1-A	Method Blank	101	115
MB 880-31438/1-A	Method Blank	88	104

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30988/5-A
Matrix: Solid
Analysis Batch: 30959

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30988

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/29/22 10:52	07/29/22 13:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/29/22 10:52	07/29/22 13:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/29/22 10:52	07/29/22 13:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/29/22 10:52	07/29/22 13:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/29/22 10:52	07/29/22 13:46	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/29/22 10:52	07/29/22 13:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*07/29/22 10:52*	*07/29/22 13:46*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*07/29/22 10:52*	*07/29/22 13:46*	*1*

Lab Sample ID: MB 880-31011/5-A
Matrix: Solid
Analysis Batch: 30959

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31011

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:17	07/30/22 01:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:17	07/30/22 01:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:17	07/30/22 01:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/29/22 13:17	07/30/22 01:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/29/22 13:17	07/30/22 01:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/29/22 13:17	07/30/22 01:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*07/29/22 13:17*	*07/30/22 01:37*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*07/29/22 13:17*	*07/30/22 01:37*	*1*

Lab Sample ID: LCS 880-31011/1-A
Matrix: Solid
Analysis Batch: 30959

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31011

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.07777		mg/Kg		78	70 - 130		
Toluene			0.100	0.09255		mg/Kg		93	70 - 130		
Ethylbenzene			0.100	0.08154		mg/Kg		82	70 - 130		
m-Xylene & p-Xylene			0.200	0.1658		mg/Kg		83	70 - 130		
o-Xylene			0.100	0.09992		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 880-31011/2-A
Matrix: Solid
Analysis Batch: 30959

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31011

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.06253	*-	mg/Kg		63	70 - 130	22	35

QC Sample Results

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

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

Lab Sample ID: LCSD 880-31011/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30959 — **Prep Batch: 31011**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.07063		mg/Kg		71	70 - 130	27	35
Ethylbenzene			0.100	0.06380	*-	mg/Kg		64	70 - 130	24	35
m-Xylene & p-Xylene			0.200	0.1309	*-	mg/Kg		65	70 - 130	24	35
o-Xylene			0.100	0.07995		mg/Kg		80	70 - 130	22	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-2665-1 MS — **Client Sample ID: FS01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30959 — **Prep Batch: 31011**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U *-	0.101	0.08983		mg/Kg		89	70 - 130
Toluene	<0.00202	U	0.101	0.09393		mg/Kg		93	70 - 130
Ethylbenzene	<0.00202	U *-	0.101	0.08053		mg/Kg		80	70 - 130
m-Xylene & p-Xylene	<0.00404	U *-	0.202	0.1598		mg/Kg		79	70 - 130
o-Xylene	<0.00202	U	0.101	0.09468		mg/Kg		94	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-2665-1 MSD — **Client Sample ID: FS01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30959 — **Prep Batch: 31011**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U *-	0.100	0.08740		mg/Kg		87	70 - 130	3	35
Toluene	<0.00202	U	0.100	0.09226		mg/Kg		92	70 - 130	2	35
Ethylbenzene	<0.00202	U *-	0.100	0.07873		mg/Kg		79	70 - 130	2	35
m-Xylene & p-Xylene	<0.00404	U *-	0.200	0.1573		mg/Kg		79	70 - 130	2	35
o-Xylene	<0.00202	U	0.100	0.09257		mg/Kg		92	70 - 130	2	35

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

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

Lab Sample ID: MB 880-30992/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31051 — **Prep Batch: 30992**

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		07/29/22 11:03	07/30/22 10:06	1

QC Sample Results

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

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

Lab Sample ID: MB 880-30992/1-A
Matrix: Solid
Analysis Batch: 31051

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30992

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		07/29/22 11:03	07/30/22 10:06	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/29/22 11:03	07/30/22 10:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*07/29/22 11:03*	*07/30/22 10:06*	*1*
o-Terphenyl	*115*		*70 - 130*	*07/29/22 11:03*	*07/30/22 10:06*	*1*

Lab Sample ID: LCS 880-30992/2-A
Matrix: Solid
Analysis Batch: 31051

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30992

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1068		mg/Kg		107	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1467	*+	mg/Kg		147	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*115*		*70 - 130*
o-Terphenyl	*110*		*70 - 130*

Lab Sample ID: LCSD 880-30992/3-A
Matrix: Solid
Analysis Batch: 31051

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30992

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1074		mg/Kg		107	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1539	*+	mg/Kg		154	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*118*		*70 - 130*
o-Terphenyl	*117*		*70 - 130*

Lab Sample ID: 890-2663-A-1-B MS
Matrix: Solid
Analysis Batch: 31051

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30992

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	701.4		mg/Kg		70	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U *+	999	868.3		mg/Kg		85	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*81*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

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

Lab Sample ID: 890-2663-A-1-C MSD
Matrix: Solid
Analysis Batch: 31051

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30992

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	732.4		mg/Kg		73	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<49.9	U *+	999	919.9		mg/Kg		90	70 - 130	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*85*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

Lab Sample ID: MB 880-31438/1-A
Matrix: Solid
Analysis Batch: 31455

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31438

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		08/03/22 15:09	08/04/22 19:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/03/22 15:09	08/04/22 19:53	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/03/22 15:09	08/04/22 19:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*08/03/22 15:09*	*08/04/22 19:53*	*1*
o-Terphenyl	*104*		*70 - 130*	*08/03/22 15:09*	*08/04/22 19:53*	*1*

Lab Sample ID: LCS 880-31438/2-A
Matrix: Solid
Analysis Batch: 31455

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31438

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	905.8		mg/Kg		91	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	923.2		mg/Kg		92	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*124*		*70 - 130*
o-Terphenyl	*131*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-31438/3-A
Matrix: Solid
Analysis Batch: 31455

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31438

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1071		mg/Kg		107	70 - 130	17	20
Diesel Range Organics (Over C10-C28)			1000	915.2		mg/Kg		92	70 - 130	1	20

QC Sample Results

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

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

Lab Sample ID: LCSD 880-31438/3-A
Matrix: Solid
Analysis Batch: 31455

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31438

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	129		70 - 130

Lab Sample ID: 890-2702-A-1-B MS
Matrix: Solid
Analysis Batch: 31455

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 31438

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F2	999	757.0		mg/Kg		76	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	642.2	F1	mg/Kg		60	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	67	S1-	70 - 130
o-Terphenyl	76		70 - 130

Lab Sample ID: 890-2702-A-1-C MSD
Matrix: Solid
Analysis Batch: 31455

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 31438

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F2	999	1090	F2	mg/Kg		109	70 - 130	36	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	999	755.7		mg/Kg		71	70 - 130	16	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	79		70 - 130
o-Terphenyl	88		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31003/1-A
Matrix: Solid
Analysis Batch: 31307

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			08/03/22 02:53	1

Lab Sample ID: LCS 880-31003/2-A
Matrix: Solid
Analysis Batch: 31307

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	269.6		mg/Kg		108	90 - 110

QC Sample Results

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-31003/3-A
Matrix: Solid
Analysis Batch: 31307

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	274.2		mg/Kg		110	90 - 110	2	20

Lab Sample ID: 880-17508-A-29-B MS
Matrix: Solid
Analysis Batch: 31307

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	<5.04	U	252	271.6		mg/Kg		108	90 - 110		

Lab Sample ID: 880-17508-A-29-C MSD
Matrix: Solid
Analysis Batch: 31307

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	<5.04	U	252	271.2		mg/Kg		108	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

GC VOA

Analysis Batch: 30959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2665-1	FS01	Total/NA	Solid	8021B	31011
890-2665-2	FS02	Total/NA	Solid	8021B	31011
890-2665-3	FS03	Total/NA	Solid	8021B	31011
890-2665-4	FS04	Total/NA	Solid	8021B	31011
890-2665-5	FS05	Total/NA	Solid	8021B	31011
890-2665-6	FS06	Total/NA	Solid	8021B	31011
MB 880-30988/5-A	Method Blank	Total/NA	Solid	8021B	30988
MB 880-31011/5-A	Method Blank	Total/NA	Solid	8021B	31011
LCS 880-31011/1-A	Lab Control Sample	Total/NA	Solid	8021B	31011
LCSD 880-31011/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31011
890-2665-1 MS	FS01	Total/NA	Solid	8021B	31011
890-2665-1 MSD	FS01	Total/NA	Solid	8021B	31011

Prep Batch: 30988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-30988/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 31011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2665-1	FS01	Total/NA	Solid	5035	
890-2665-2	FS02	Total/NA	Solid	5035	
890-2665-3	FS03	Total/NA	Solid	5035	
890-2665-4	FS04	Total/NA	Solid	5035	
890-2665-5	FS05	Total/NA	Solid	5035	
890-2665-6	FS06	Total/NA	Solid	5035	
MB 880-31011/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31011/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31011/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2665-1 MS	FS01	Total/NA	Solid	5035	
890-2665-1 MSD	FS01	Total/NA	Solid	5035	

Analysis Batch: 31075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2665-1	FS01	Total/NA	Solid	Total BTEX	
890-2665-2	FS02	Total/NA	Solid	Total BTEX	
890-2665-3	FS03	Total/NA	Solid	Total BTEX	
890-2665-4	FS04	Total/NA	Solid	Total BTEX	
890-2665-5	FS05	Total/NA	Solid	Total BTEX	
890-2665-6	FS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 30992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2665-1	FS01	Total/NA	Solid	8015NM Prep	
890-2665-3	FS03	Total/NA	Solid	8015NM Prep	
890-2665-4	FS04	Total/NA	Solid	8015NM Prep	
890-2665-5	FS05	Total/NA	Solid	8015NM Prep	
890-2665-6	FS06	Total/NA	Solid	8015NM Prep	
MB 880-30992/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30992/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

GC Semi VOA (Continued)

Prep Batch: 30992 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-30992/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2663-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2663-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2665-1	FS01	Total/NA	Solid	8015B NM	30992
890-2665-3	FS03	Total/NA	Solid	8015B NM	30992
890-2665-4	FS04	Total/NA	Solid	8015B NM	30992
890-2665-5	FS05	Total/NA	Solid	8015B NM	30992
890-2665-6	FS06	Total/NA	Solid	8015B NM	30992
MB 880-30992/1-A	Method Blank	Total/NA	Solid	8015B NM	30992
LCS 880-30992/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30992
LCSD 880-30992/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30992
890-2663-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	30992
890-2663-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30992

Analysis Batch: 31104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2665-1	FS01	Total/NA	Solid	8015 NM	
890-2665-2	FS02	Total/NA	Solid	8015 NM	
890-2665-3	FS03	Total/NA	Solid	8015 NM	
890-2665-4	FS04	Total/NA	Solid	8015 NM	
890-2665-5	FS05	Total/NA	Solid	8015 NM	
890-2665-6	FS06	Total/NA	Solid	8015 NM	

Prep Batch: 31438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2665-2	FS02	Total/NA	Solid	8015NM Prep	
MB 880-31438/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31438/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31438/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2702-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2702-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2665-2	FS02	Total/NA	Solid	8015B NM	31438
MB 880-31438/1-A	Method Blank	Total/NA	Solid	8015B NM	31438
LCS 880-31438/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31438
LCSD 880-31438/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31438
890-2702-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	31438
890-2702-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31438

HPLC/IC

Leach Batch: 31003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2665-1	FS01	Soluble	Solid	DI Leach	
890-2665-2	FS02	Soluble	Solid	DI Leach	
890-2665-3	FS03	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

HPLC/IC (Continued)

Leach Batch: 31003 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2665-4	FS04	Soluble	Solid	DI Leach	
890-2665-5	FS05	Soluble	Solid	DI Leach	
890-2665-6	FS06	Soluble	Solid	DI Leach	
MB 880-31003/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31003/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-31003/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-17508-A-29-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17508-A-29-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2665-1	FS01	Soluble	Solid	300.0	31003
890-2665-2	FS02	Soluble	Solid	300.0	31003
890-2665-3	FS03	Soluble	Solid	300.0	31003
890-2665-4	FS04	Soluble	Solid	300.0	31003
890-2665-5	FS05	Soluble	Solid	300.0	31003
890-2665-6	FS06	Soluble	Solid	300.0	31003
MB 880-31003/1-A	Method Blank	Soluble	Solid	300.0	31003
LCS 880-31003/2-A	Lab Control Sample	Soluble	Solid	300.0	31003
LCSD 880-31003/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31003
880-17508-A-29-B MS	Matrix Spike	Soluble	Solid	300.0	31003
880-17508-A-29-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31003

Lab Chronicle

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

Client Sample ID: FS01
Date Collected: 07/26/22 08:40
Date Received: 07/27/22 16:41

Lab Sample ID: 890-2665-1
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			4.95 g	5 mL	31011	07/29/22 13:17	EL	EETSC MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30959	07/30/22 02:06	MR	EETSC M
Total/NA	Analysis	Total BTEX		1			31075	07/30/22 18:57	AJ	EETSC M
Total/NA	Analysis	8015 NM		1			31104	07/31/22 10:27	AJ	EETSC M
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30992	07/29/22 11:03	DM	EETSC M
Total/NA	Analysis	8015B NM		1			31051	07/30/22 12:37	AJ	EETSC M
Soluble	Leach	DI Leach			4.97 g	50 mL	31003	07/29/22 11:39	SMC	EETSC M
Soluble	Analysis	300.0		1			31307	08/03/22 06:09	CH	EETSC M

Client Sample ID: FS02
Date Collected: 07/26/22 11:00
Date Received: 07/27/22 16:41

Lab Sample ID: 890-2665-2
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	31011	07/29/22 13:17	EL	EETSC MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30959	07/30/22 02:26	MR	EETSC M
Total/NA	Analysis	Total BTEX		1			31075	07/30/22 18:57	AJ	EETSC M
Total/NA	Analysis	8015 NM		1			31104	07/31/22 10:27	AJ	EETSC M
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	31438	08/03/22 15:09	DM	EETSC M
Total/NA	Analysis	8015B NM		1			31455	08/05/22 04:36	AJ	EETSC M
Soluble	Leach	DI Leach			4.97 g	50 mL	31003	07/29/22 11:39	SMC	EETSC M
Soluble	Analysis	300.0		1			31307	08/03/22 06:17	CH	EETSC M

Client Sample ID: FS03
Date Collected: 07/27/22 08:40
Date Received: 07/27/22 16:41

Lab Sample ID: 890-2665-3
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	31011	07/29/22 13:17	EL	EETSC MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30959	07/30/22 02:46	MR	EETSC M
Total/NA	Analysis	Total BTEX		1			31075	07/30/22 18:57	AJ	EETSC M
Total/NA	Analysis	8015 NM		1			31104	07/31/22 10:27	AJ	EETSC M
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30992	07/29/22 11:03	DM	EETSC M
Total/NA	Analysis	8015B NM		1			31051	07/30/22 13:21	AJ	EETSC M
Soluble	Leach	DI Leach			5.01 g	50 mL	31003	07/29/22 11:39	SMC	EETSC M
Soluble	Analysis	300.0		1			31307	08/03/22 06:24	CH	EETSC M

Client Sample ID: FS04
Date Collected: 07/27/22 08:45
Date Received: 07/27/22 16:41

Lab Sample ID: 890-2665-4
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	31011	07/29/22 13:17	EL	EETSC MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30959	07/30/22 03:07	MR	EETSC M
Total/NA	Analysis	Total BTEX		1			31075	07/30/22 18:57	AJ	EETSC M

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

Client Sample ID: FS04
Date Collected: 07/27/22 08:45
Date Received: 07/27/22 16:41

Lab Sample ID: 890-2665-4
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			31104	07/31/22 10:27	AJ	EETSC MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	30992	07/29/22 11:03	DM	EETSC M
Total/NA	Analysis	8015B NM		1			31051	07/30/22 13:42	AJ	EETSC M
Soluble	Leach	DI Leach			4.99 g	50 mL	31003	07/29/22 11:39	SMC	EETSC M
Soluble	Analysis	300.0		1			31307	08/03/22 06:32	CH	EETSC M

Client Sample ID: FS05
Date Collected: 07/27/22 11:15
Date Received: 07/27/22 16:41

Lab Sample ID: 890-2665-5
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			5.00 g	5 mL	31011	07/29/22 13:17	EL	EETSC MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30959	07/30/22 03:27	MR	EETSC M
Total/NA	Analysis	Total BTEX		1			31075	07/30/22 18:57	AJ	EETSC M
Total/NA	Analysis	8015 NM		1			31104	07/31/22 10:27	AJ	EETSC M
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30992	07/29/22 11:03	DM	EETSC M
Total/NA	Analysis	8015B NM		1			31051	07/30/22 14:04	AJ	EETSC M
Soluble	Leach	DI Leach			4.96 g	50 mL	31003	07/29/22 11:39	SMC	EETSC M
Soluble	Analysis	300.0		1			31307	08/03/22 06:40	CH	EETSC M

Client Sample ID: FS06
Date Collected: 07/27/22 12:15
Date Received: 07/27/22 16:41

Lab Sample ID: 890-2665-6
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	31011	07/29/22 13:17	EL	EETSC MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	30959	07/30/22 03:48	MR	EETSC M
Total/NA	Analysis	Total BTEX		1			31075	07/30/22 18:57	AJ	EETSC M
Total/NA	Analysis	8015 NM		1			31104	07/31/22 10:27	AJ	EETSC M
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30992	07/29/22 11:03	DM	EETSC M
Total/NA	Analysis	8015B NM		1			31051	07/30/22 14:25	AJ	EETSC M
Soluble	Leach	DI Leach			5.01 g	50 mL	31003	07/29/22 11:39	SMC	EETSC M
Soluble	Analysis	300.0		1			31307	08/03/22 06:48	CH	EETSC M

Laboratory References:
EETSC MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

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

Protocol References:

ASTM = ASTM International
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
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:

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

Sample Summary

Client: Ensolum
Project/Site: PLU BIG SINK 29 CTB

Job ID: 890-2665-1
SDG: 03E1558069

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2665-1	FS01	Solid	07/26/22 08:40	07/27/22 16:41	1.5
890-2665-2	FS02	Solid	07/26/22 11:00	07/27/22 16:41	1.5
890-2665-3	FS03	Solid	07/27/22 08:40	07/27/22 16:41	1.5
890-2665-4	FS04	Solid	07/27/22 08:45	07/27/22 16:41	1.5
890-2665-5	FS05	Solid	07/27/22 11:15	07/27/22 16:41	1.5
890-2665-6	FS06	Solid	07/27/22 12:15	07/27/22 16:41	1.5

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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: _____

www.xenco.com Page 1 of 1

Project Manager:	Takoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy, Inc
Address:	3122 National Parks Highway	Address:	3104 E. Green Street
City, State ZIP:	Carlsbad, NM, 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337-257-8307 Email:		garrettgreen@exxonmobile.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:	PLU Big Sinks 29 CTB	Turn Around	
Project Number:	03E1558069	☑ Routine ☐ Rush	
Project Location:	32.10432, -103.80249	Due Date:	
Sampler's Name:	Stuart Hyde	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.2
Total Containers:		Corrected Temperature:	1.0

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: NaSO$_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Chlorides	TPH	BTEX	Sample Comments
FS01	S	7/26/22	0840	1.5'	comp	1		X	X	X	Incident ID:
FS02	S	7/26/22	1100	1.5'				X	X	X	nAPP2219544127
FS03	S	7/27/22	0840	1.5'				X	X	X	Cost Center:
FS04	S	7/27/22	0845	1.5'				X	X	X	1851151001
FS05	S	7/27/22	1115	1.5'				X	X	X	PM email:
FS06	S	7/27/22	1215	1.5'				X	X	X	tmorrissey@ensolum.com

890-2665 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	Amanda Stefa	7/27/22 1641	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2665-1
SDG Number: 03E1558069

Login Number: 2665
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.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2665-1
SDG Number: 03E1558069

Login Number: 2665
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/29/22 10:24 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 D

NMOCD Notifications

Collins, Melanie

From: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Sent: Monday, May 16, 2022 8:16 AM
To: Baker, Adrian; Pennington, Shelby G; DelawareSpills /SM; Green, Garrett J
Cc: Bratcher, Mike, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD
Subject: RE: [EXTERNAL] 24 notification PLU Big Sinks 29 CTB release date 5/13/21

Adrian,

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Robert Hamlet • Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Baker, Adrian <adrian.baker@exxonmobil.com>
Sent: Saturday, May 14, 2022 4:21 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Pennington, Shelby G <shelby.g.pennington@exxonmobil.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Green, Garrett J <garrett.green@exxonmobil.com>
Subject: [EXTERNAL] 24 notification PLU Big Sinks 29 CTB release date 5/13/21

All,

This is notification of a release greater than 25 barrels that occurred yesterday at the PLU Big Sinks 29 CTB near the GPS coordinates given below. All of the fluids in containment and all standing fluids were recovered by vacuum truck. Details will be provided with a form C-141. Please contact us with any questions or concerns.

GPS: 32.104438, -103.798956

Thank you,

Adrian Baker
Environmental Coordinator
Permian Business Unit

XTO Energy Inc.
6401 N. Holiday Hill Dr.
Midland, Tx 79707
Mobile:(432)-236-3808
adrian.baker@exxonmobil.com

From: Green, Garrett J
To: ocd.enviro@state.nm.us; Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD; Nobui, Jennifer, EMNRD
Cc: DelawareSpills /SM; Aimee Cole; Tacoma Morrissey
Subject: XTO - 48 Hour Liner Inspection Notification - PLU Big Sinks 29 CTB - Released on 5/13/22
Date: Tuesday, June 28, 2022 12:53:19 PM

[**EXTERNAL EMAIL**]

Good afternoon,

This is sent as a 48-hour notification, XTO is scheduled to inspect the lined containment at PLU Big Sinks 29 CTB released on (5/13/22), on Thursday, June 30, 2022, at 1:30 pm MST. A 24 hour release notification was sent out on Saturday, May 14, 2022 5:21 PM since the release was greater than 25 barrels in volume. Please call us with any questions or concerns.

GPS Coordinates: (32.104438, -103.798956)

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

From: Green, Garrett J
To: Kalei Jennings; Tacoma Morrissey; Ben Belill; Stuart Hyde
Subject: FW: XTO - Sampling Notification (Week of 7/25/22 - 7/29/22)
Date: Thursday, July 21, 2022 3:57:16 PM

[**EXTERNAL EMAIL**]

From: Green, Garrett J
Sent: Thursday, July 21, 2022 3:57 PM
To: 'ocd.enviro@state.nm.us' <ocd.enviro@state.nm.us>; 'Bratcher, Mike, EMNRD' <mike.bratcher@state.nm.us>; 'Hamlet, Robert, EMNRD' <Robert.Hamlet@state.nm.us>
Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>
Subject: XTO - Sampling Notification (Week of 7/25/22 - 7/29/22)

All,

XTO plans to complete final sampling activities at the following sites the week of July 25, 2022.

Monday
- PLU Big Sinks 25 CTB/ NAPP2214544127

Tuesday
- PLU Big Sinks 25 CTB/ NAPP2214544127

Wednesday
- PLU C1 Frac Pond / NAPP2207743395

Thursday

Friday
- PLU Big Sinks Fed 25 Battery / NAB1921742793

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 133002

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 133002
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved.	9/20/2022