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	nAB1815755244
District RP	2RP-4777
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-4777
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude N 32.154685 Longitude W -104.01618
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Goldenchild Central Tank Battery	Site Type: Production Well Facility
Date Release Discovered: 5/20/2018	API# *(if applicable):* 30-015-41846

Unit Letter	Section	Township	Range	County
P	6	25S	29E	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): 1.5	Volume Recovered (bbls): 0.5
☒ Produced Water	Volume Released (bbls): 11.5	Volume Recovered (bbls): 3.5
	Is the concentration of dissolved chloride 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 heater-treater loaded up due to insufficient operating gas, causing fluid to escape flare stack. The facility was shut in until repairs could be made. Fluid sprayed westward from the flare. A small amount of fluid entered the pasture.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nAB1815755244
District RP	2RP-4777
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? Release volume was less than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

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:
N/A

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: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 5-8-2020

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAB1815755244
District RP	2RP-4777
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?	51-100 (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	nAB1815755244
District RP	2RP-4777
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: ___Kyle Littrell_____ Title: _____SH&E Supervisor_____

Signature:_____ Date: _____5-8-2020_____

email: _____Kyle_Littrell@xtoenergy.com_____ Telephone: ____(432)-221-7331_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAB1815755244
District RP	2RP-4777
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: 4/14/2023

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

OCD Only

Received by: OCD Date: 4/19/2023

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

Closure Approved by: Ashley Maxwell Date: 4/20/2023

Printed Name: Ashley Maxwell Title: Environmental Specialist

ENSOLUM

April 14, 2023

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

Re: Closure Request
Goldenchild CTB
Incident Numbers nAB1815755244, nAPP2035256230, nAPP2101331137, nAPP2101335437, nAPP2102237559
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 additional excavation and soil sampling activities at the Goldenchild Central Tank Battery (CTB) (Site). The purpose of the additional excavation and soil sampling activities was to address deferred soil impacts associated with multiple releases at the Site. This *Closure Request* describing additional excavation and soil sampling activities that have occurred and requesting no further action for Incident Numbers nAB1815755244, nAPP2035256230, nAPP2101331137, nAPP2101335437, and nAPP2102237559.

SITE DESCRIPTION AND BACKGROUND

The Site is located in Unit P, Section 6, Township 25 South, Range 29 East, in Eddy County, New Mexico (Figure 1) (32.15437°, -104.01635°) and is associated with oil and gas exploration and production operations on New Mexico state land.

Incident Number nAB1815755244

On May 20, 2018, the heater-treater loaded up due to insufficient operating gas, which caused fluid to escape a flare stack. Approximately 1.5 barrels (bbls) of oil and 11.5 bbls of produced water were released. Vacuum trucks recovered a total of 0.5 bbls of oil and 3.5 bbls of produced water. A total of approximately 4,500 cubic yards of impacted soil were excavated from the Site; however, residual impacted soil was left in place for compliance with the XTO safety policy regarding earth moving activities within 2 feet of flare stacks and anchors. A *Closure Request* was submitted to the New Mexico Oil Conservation Division (NMOCD) on May 8, 2020, requesting the deferral of approximately 150 cubic yards of impacted soil immediately adjacent to the flare stack (Figure 2) until the Site underwent major reconstruction or the well pad was reclaimed. NMOCD denied the request on September 13, 2022 due to an issue with the C-141, however requested that remediation be completed immediately once the flare has been removed.

Incident Numbers nAPP2035256230, nAPP2101331137, nAPP2101335437, and nAPP2102237559

Four separate flare fires occurred on December 4, 2020, January 7, 2020, January 8, 2020, and January 15, 2020, which occurred at a flare situated southwest of the previously described flare release. A total of 0.04 bbls of crude oil and 0.27 bbls of condensate were released from the flare, which resulted in four small fires. Over 110 cubic yards of impacted soil were excavated; however, it was deemed unsafe to remove impacted soil immediately adjacent to the flare stack. As a result, a Deferral Request was submitted to the NMOCD on May 28, 2021, with a request to defer approximately 67 cubic yards of residually impacted soil in areas (Figure 2) that were unsafe to excavate until the Site underwent major reconstruction or the well pad was reclaimed. NMOCD approved the Deferral Request on June 28, 2022.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

Based on the results of the Site Characterization and approval of the *Deferral Request* by the NMOCD, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

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

EXCAVATION SOIL SAMPLING ACTIVITIES

XTO completed reconstruction activities in the vicinity of two deferred areas and as such, the remaining impacted soil was excavated and confirmation soil samples were collected and analyzed to confirm compliance with NMOCD rules and regulations. Previous remedial actions completed at the Site related to these five releases are documented on the NMOCD Imaging Portal.

Between August 2 and August 4, 2022, Ensolum was onsite to oversee excavation of the residual soil impacts as indicated by field screening results and previous analytical data surrounding the two deferred areas. Excavation activities were performed using a backhoe and transport vehicles. Excavation activities were directed by field screening of volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride utilizing Hach® chloride QuanTab® test strips. The excavation extent was mapped utilizing a handheld Global Positioning System (GPS) unit, which is depicted on Figure 3. Photographic documentation is included in Appendix A.

Following removal of impacted soil, Ensolum personnel collected 5-point composite soil samples representing a maximum of 200 square feet from the sidewalls and 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. All composite soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following contaminants of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

The final northeastern excavation measured approximately 193 square feet in areal extent and a total depth of approximately 9.5 feet bgs. A total of 68 cubic yards of impacted soil was removed, transported, and properly disposed at the R360 Facility in Carlsbad, New Mexico. The final southwestern excavation extent measured approximately 465 square feet in areal extent. A total of approximately 120 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the same R360 Facility. After completion of confirmation sampling, the excavation areas were backfilled and recontoured to match the pad and surroundings so that the areas could be restored and used for oil and gas exploration and production.

Incident Numbers nAPP2035256230, nAPP2101331137, nAPP2101335437, and nAPP2102237559

Composite soil samples FS01 through FS03 were collected from the floor of the southwestern excavation at a depth of 7 feet below ground surface (bgs). Composite soil samples SW01 through SW04 were collected from the sidewalls at depths ranging from the ground surface to 7 feet bgs. The excavation size increased based on the potential for initial sidewall soil exceeding the Closure Criteria, in the vicinity of SW01 and SW03, for one or more COC. Soil represented by these samples was removed and subsequent samples SW02 and SW04 were collected. Laboratory analytical results for excavation floor soil samples FS01 through FS03, collected at 7 feet bgs, indicated all COC concentrations were compliant with the Closure Criteria. Laboratory analytical results for final excavation sidewall samples SW02 and SW04 indicated all COC concentrations were compliant with the Closure Criteria. The final excavation extent and excavation soil sample locations are presented on Figure 3. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix B.

Incident Number nAB1815755244

Composite soil sample FS13 was collected from the northern excavation floor at a depth of 9 feet bgs. Sidewall soil sample SW39 was collected along the excavation sidewalls at depths ranging from the ground surface to 9 feet bgs. Laboratory analytical results indicated TPH concentrations in both floor and sidewall soil samples exceeded the Closure Criteria. As result, additional impacted soil was excavated and subsequent composite floor soil sample FS14 and sidewall soil samples SW40 through SW42 were collected and analyzed as previously described. Laboratory analytical results for the final excavation indicated all COC concentrations were in compliance with the Closure Criteria. The final excavation extent and excavation soil sample locations are presented on Figure 3. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix B.

CLOSURE REQUEST

Additional excavation activities were conducted at the Site to address residually impacted soil from multiple releases associated with two flares at the Site. Deferral of final remediation of residual soil impacts was approved by NMOCD. XTO completed reconstruction activities in 2022 and as such, the deferred areas became accessible for final remedial actions. Ensolum oversaw the combined excavation of approximately 188 cubic yards of soil and laboratory analytical results indicated all COC concentrations along the floor and sidewalls of the two excavations were in compliance with the Closure Criteria. Excavation of residually impacted soil has mitigated impacts at this Site. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests final closure for Incident Numbers nAB1815755244, nAPP2035256230, nAPP2101331137, nAPP2101335437, and nAPP2102237559.

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

Sincerely,
Ensolum, LLC

Daniel R. Moir, PG
Senior Managing Geologist

Ashley L. Ager, MS, PG
CEO

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

Appendices:

Figure 1	Site Receptor Map
Figure 2	Deferred Areas
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Photographic Log
Appendix B	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix C	NMOCD Notifications
Appendix D	Final C-141

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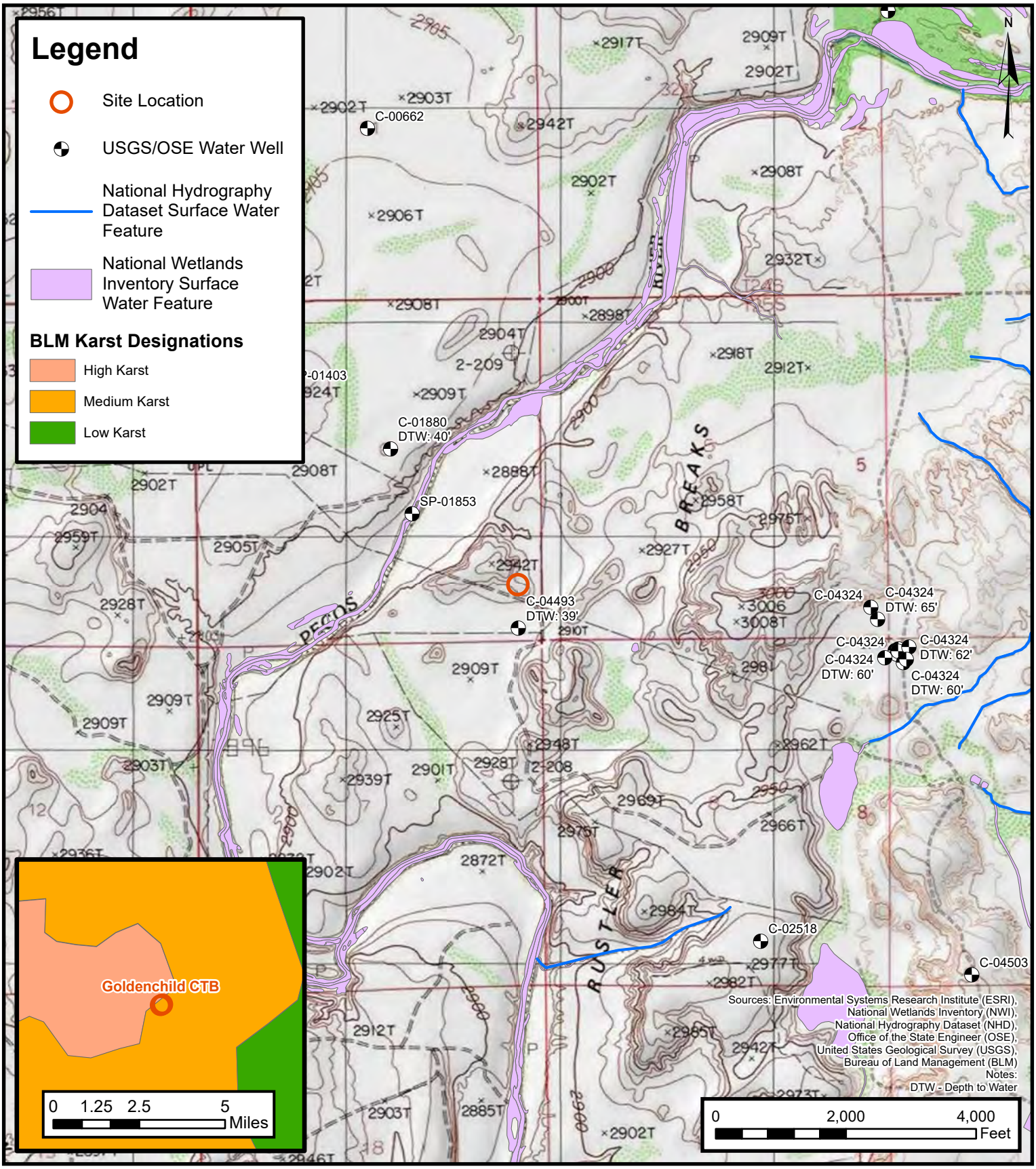
Figures



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Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

Goldenchild CTB
XTO ENERGY, INC
Incident ID: nAB1815755244, nAPP2035256230, nAPP2101331137, nAPP2101335437, nAPP2102237559
Unit P, Section 6, Township 25 South, Range 29 East
Eddy County, New Mexico

FIGURE
1

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Deferral Areas

Goldenchild CTB
XTO ENERGY, INC
Incident ID: nAB1815755244, nAPP2035256230, nAPP2101331137, nAPP2101335437, nAPP2102237559
Unit P, Section 6, Township 25 South, Range 29 East
Eddy County, New Mexico

FIGURE

2

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Excavation Soil Sample Locations

Goldenchild CTB
XTO ENERGY, INC
Incident ID: nAB1815755244, nAPP2035256230, nAPP2101331137, nAPP2101335437, nAPP2102237559
Unit P, Section 6, Township 25 South, Range 29 East
Eddy County, New Mexico

FIGURE

3

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Table

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
GOLDENCHILD 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)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**NE**	**100**	**600**
Incident Numbers nAPP2035256230, nAPP2101331137, nAPP2101335437, and nAPP2102237559 Confirmation Soil Samples										
FS01	08/04/2022	7	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	314
FS02	08/04/2022	7	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	367
FS03	08/04/2022	7	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	464
~~SW01~~	~~08/04/2022~~	~~0-7~~	~~<0.00200~~	~~<0.00400~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~**1,250**~~
SW02	08/04/2022	0-7	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	450
~~SW03~~	~~08/04/2022~~	~~0-7~~	~~<0.00200~~	~~<0.00401~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~**741**~~
SW04	08/04/2022	0-7	<0.00202	<0.00403	<49.8	<49.8	<49.8	<49.8	<49.8	423
Incident Number nAB1815755244 Confirmation Soil Samples										
~~FS13~~	~~08/02/2022~~	~~9~~	~~<0.00201~~	~~0.0195~~	~~<49.8~~	~~566~~	~~72.7~~	~~566~~	~~639~~	~~8.67~~
FS14	08/03/2022	9.5	<0.00200	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	8.08
~~SW39~~	08/03/2022	~~0-9~~	~~<0.00202~~	~~<0.00403~~	~~<50.0~~	~~466~~	~~71.2~~	~~466~~	~~537~~	~~45.1~~
SW40	08/03/2022	0-9	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	30.9
SW41	08/03/2022	0-9	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	31.4
SW42	08/04/2022	0-9	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	286

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

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

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APPENDIX A

Photographic Log

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Photographic Log
XTO Energy, Inc
Goldenchild CTB
Multiple Incident Numbers

Photograph: 1 Date: 8/4/2023
Description: Excavation preparation
View: North

Photograph: 2 Date: 8/4/2023
Description: Excavation actvities
View: West

Photograph: 3 Date: 8/4/2023
Description: Excavation progress
View: Northeast

Photograph: 4 Date: 8/4/2023
Description: Finishing excavation activities
View: West

ENSOLUM

APPENDIX B

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: 890-2731-1
Laboratory Sample Delivery Group: 03E1558018
Client Project/Site: Goldenchild CTB

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

Attn: Josh Adams

JKramer

Authorized for release by:
8/18/2022 9:48:24 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: Goldenchild CTB

Laboratory Job ID: 890-2731-1
SDG: 03E1558018

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

Qualifiers

GC VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

Job ID: 890-2731-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2731-1

Receipt
The samples were received on 8/5/2022 11:08 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 5.2°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-31861 and analytical batch 880-32007 was outside control limits. Sample non-homogeneity is suspected.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-31770/2-A) and (LCSD 880-31770/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: FS01 (890-2731-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: FS02 (890-2731-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SW02 (890-2731-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SW04 (890-2731-7). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-31858 and analytical batch 880-31926 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

Client Sample ID: FS01

Lab Sample ID: 890-2731-1
Matrix: Solid
Date Collected: 08/04/22 13:00
Date Received: 08/05/22 11:08
Sample Depth: 7'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		08/09/22 15:47	08/11/22 19:09	1
Toluene	<0.00202	U	0.00202		mg/Kg		08/09/22 15:47	08/11/22 19:09	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		08/09/22 15:47	08/11/22 19:09	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		08/09/22 15:47	08/11/22 19:09	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		08/09/22 15:47	08/11/22 19:09	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		08/09/22 15:47	08/11/22 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*08/09/22 15:47*	*08/11/22 19:09*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*08/09/22 15:47*	*08/11/22 19:09*	*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			08/12/22 10:15	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			08/09/22 09:31	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		08/08/22 14:08	08/09/22 03:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/08/22 14:08	08/09/22 03:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/08/22 14:08	08/09/22 03:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*08/08/22 14:08*	*08/09/22 03:13*	*1*
o-Terphenyl	*133*	*S1+*	*70 - 130*	*08/08/22 14:08*	*08/09/22 03:13*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**314**		5.01		mg/Kg			08/17/22 15:57	1

Client Sample ID: FS02

Lab Sample ID: 890-2731-2
Matrix: Solid
Date Collected: 08/04/22 13:05
Date Received: 08/05/22 11:08
Sample Depth: 7'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/09/22 15:47	08/11/22 19:30	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/09/22 15:47	08/11/22 19:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/09/22 15:47	08/11/22 19:30	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		08/09/22 15:47	08/11/22 19:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/09/22 15:47	08/11/22 19:30	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		08/09/22 15:47	08/11/22 19:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*08/09/22 15:47*	*08/11/22 19:30*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

Client Sample ID: FS02

Lab Sample ID: 890-2731-2
Matrix: Solid
Date Collected: 08/04/22 13:05
Date Received: 08/05/22 11:08
Sample Depth: 7'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*08/09/22 15:47*	*08/11/22 19:30*	*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			08/12/22 10:15	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			08/09/22 09:31	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		08/08/22 14:08	08/09/22 03:34	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		08/08/22 14:08	08/09/22 03:34	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/08/22 14:08	08/09/22 03:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*08/08/22 14:08*	*08/09/22 03:34*	*1*
o-Terphenyl	*139*	*S1+*	*70 - 130*	*08/08/22 14:08*	*08/09/22 03:34*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**367**		5.01	mg/Kg			08/17/22 16:05	1

Client Sample ID: FS03

Lab Sample ID: 890-2731-3
Matrix: Solid
Date Collected: 08/04/22 14:00
Date Received: 08/05/22 11:08
Sample Depth: 7'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		08/09/22 15:47	08/11/22 21:21	1
Toluene	<0.00199	U	0.00199	mg/Kg		08/09/22 15:47	08/11/22 21:21	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		08/09/22 15:47	08/11/22 21:21	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		08/09/22 15:47	08/11/22 21:21	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		08/09/22 15:47	08/11/22 21:21	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		08/09/22 15:47	08/11/22 21:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*08/09/22 15:47*	*08/11/22 21:21*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*08/09/22 15:47*	*08/11/22 21:21*	*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			08/12/22 10:15	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			08/09/22 09:31	1

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Client Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

Client Sample ID: FS03

Lab Sample ID: 890-2731-3
Matrix: Solid
Date Collected: 08/04/22 14:00
Date Received: 08/05/22 11:08
Sample Depth: 7'

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		08/08/22 14:08	08/09/22 03:55	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/08/22 14:08	08/09/22 03:55	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/08/22 14:08	08/09/22 03:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*08/08/22 14:08*	*08/09/22 03:55*	*1*
o-Terphenyl	*130*		*70 - 130*	*08/08/22 14:08*	*08/09/22 03:55*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**464**		4.98		mg/Kg			08/17/22 16:28	1

Client Sample ID: SW01

Lab Sample ID: 890-2731-4
Matrix: Solid
Date Collected: 08/04/22 13:30
Date Received: 08/05/22 11:08
Sample Depth: 0-7'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/09/22 15:47	08/11/22 21:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/09/22 15:47	08/11/22 21:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/09/22 15:47	08/11/22 21:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/09/22 15:47	08/11/22 21:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/09/22 15:47	08/11/22 21:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/09/22 15:47	08/11/22 21:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*08/09/22 15:47*	*08/11/22 21:41*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*08/09/22 15:47*	*08/11/22 21:41*	*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			08/12/22 10:15	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			08/09/22 09:31	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		08/08/22 14:08	08/09/22 04:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/08/22 14:08	08/09/22 04:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/08/22 14:08	08/09/22 04:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*08/08/22 14:08*	*08/09/22 04:16*	*1*
o-Terphenyl	*129*		*70 - 130*	*08/08/22 14:08*	*08/09/22 04:16*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

Client Sample ID: SW01

Lab Sample ID: 890-2731-4
Matrix: Solid
Date Collected: 08/04/22 13:30
Date Received: 08/05/22 11:08
Sample Depth: 0-7'

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1250		25.0		mg/Kg			08/17/22 16:36	5

Client Sample ID: SW02

Lab Sample ID: 890-2731-5
Matrix: Solid
Date Collected: 08/04/22 13:45
Date Received: 08/05/22 11:08
Sample Depth: 0-7'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/09/22 15:47	08/11/22 22:02	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/09/22 15:47	08/11/22 22:02	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/09/22 15:47	08/11/22 22:02	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/09/22 15:47	08/11/22 22:02	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/09/22 15:47	08/11/22 22:02	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/09/22 15:47	08/11/22 22:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*08/09/22 15:47*	*08/11/22 22:02*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*08/09/22 15:47*	*08/11/22 22:02*	*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			08/12/22 10:15	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			08/09/22 09:31	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		08/08/22 14:08	08/09/22 04:37	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/08/22 14:08	08/09/22 04:37	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/08/22 14:08	08/09/22 04:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*08/08/22 14:08*	*08/09/22 04:37*	*1*
o-Terphenyl	*136*	*S1+*	*70 - 130*	*08/08/22 14:08*	*08/09/22 04:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	450		5.00		mg/Kg			08/17/22 16:44	1

Client Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

Client Sample ID: SW03

Lab Sample ID: 890-2731-6
Matrix: Solid
Date Collected: 08/04/22 13:48
Date Received: 08/05/22 11:08
Sample Depth: 0-7'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/09/22 15:47	08/11/22 22:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/09/22 15:47	08/11/22 22:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/09/22 15:47	08/11/22 22:22	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		08/09/22 15:47	08/11/22 22:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/09/22 15:47	08/11/22 22:22	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		08/09/22 15:47	08/11/22 22:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*08/09/22 15:47*	*08/11/22 22:22*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*08/09/22 15:47*	*08/11/22 22:22*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			08/12/22 10:15	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			08/09/22 09:31	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		08/08/22 14:08	08/09/22 04:58	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/08/22 14:08	08/09/22 04:58	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/08/22 14:08	08/09/22 04:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*08/08/22 14:08*	*08/09/22 04:58*	*1*
o-Terphenyl	*128*		*70 - 130*	*08/08/22 14:08*	*08/09/22 04:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**741**		5.04		mg/Kg			08/17/22 16:52	1

Client Sample ID: SW04

Lab Sample ID: 890-2731-7
Matrix: Solid
Date Collected: 08/04/22 13:50
Date Received: 08/05/22 11:08
Sample Depth: 0-1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		08/09/22 15:47	08/11/22 22:43	1
Toluene	<0.00202	U	0.00202		mg/Kg		08/09/22 15:47	08/11/22 22:43	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		08/09/22 15:47	08/11/22 22:43	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		08/09/22 15:47	08/11/22 22:43	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		08/09/22 15:47	08/11/22 22:43	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		08/09/22 15:47	08/11/22 22:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*08/09/22 15:47*	*08/11/22 22:43*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

Client Sample ID: SW04

Date Collected: 08/04/22 13:50
Date Received: 08/05/22 11:08
Sample Depth: 0-1'

Lab Sample ID: 890-2731-7

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*08/09/22 15:47*	*08/11/22 22:43*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			08/12/22 10:15	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			08/09/22 09:31	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		08/08/22 14:08	08/09/22 05:20	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		08/08/22 14:08	08/09/22 05:20	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/08/22 14:08	08/09/22 05:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*08/08/22 14:08*	*08/09/22 05:20*	*1*
o-Terphenyl	*133*	*S1+*	*70 - 130*	*08/08/22 14:08*	*08/09/22 05:20*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**423**		5.04		mg/Kg			08/17/22 17:00	1

Surrogate Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

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)										
880-17785-A-21-C MS	Matrix Spike	105	103										
880-17785-A-21-D MSD	Matrix Spike Duplicate	98	108										
880-17971-A-1-G MS	Matrix Spike	101	99										
880-17971-A-1-H MSD	Matrix Spike Duplicate	99	99										
890-2731-1	FS01	99	102										
890-2731-2	FS02	99	105										
890-2731-3	FS03	93	106										
890-2731-4	SW01	98	100										
890-2731-5	SW02	100	106										
890-2731-6	SW03	103	105										
890-2731-7	SW04	105	102										
LCS 880-31861/1-A	Lab Control Sample	103	97										
LCS 880-32010/1-A	Lab Control Sample	101	98										
LCSD 880-31861/2-A	Lab Control Sample Dup	96	98										
LCSD 880-32010/2-A	Lab Control Sample Dup	99	100										
MB 880-31861/5-A	Method Blank	93	104										
MB 880-32010/5-A	Method Blank	93	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)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
820-5242-A-1-I MS	Matrix Spike	90	99										
820-5242-A-1-J MSD	Matrix Spike Duplicate	88	97										
890-2731-1	FS01	110	133 S1+										
890-2731-2	FS02	112	139 S1+										
890-2731-3	FS03	106	130										
890-2731-4	SW01	105	129										
890-2731-5	SW02	110	136 S1+										
890-2731-6	SW03	105	128										
890-2731-7	SW04	107	133 S1+										
LCS 880-31770/2-A	Lab Control Sample	122	150 S1+										
LCSD 880-31770/3-A	Lab Control Sample Dup	118	142 S1+										
MB 880-31770/1-A	Method Blank	95	117										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31861/5-A
Matrix: Solid
Analysis Batch: 32007

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31861

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/09/22 15:47	08/11/22 15:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/09/22 15:47	08/11/22 15:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/09/22 15:47	08/11/22 15:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/09/22 15:47	08/11/22 15:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/09/22 15:47	08/11/22 15:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/09/22 15:47	08/11/22 15:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*08/09/22 15:47*	*08/11/22 15:56*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*08/09/22 15:47*	*08/11/22 15:56*	*1*

Lab Sample ID: LCS 880-31861/1-A
Matrix: Solid
Analysis Batch: 32007

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31861

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09393		mg/Kg		94	70 - 130		
Toluene			0.100	0.1024		mg/Kg		102	70 - 130		
Ethylbenzene			0.100	0.1067		mg/Kg		107	70 - 130		
m-Xylene & p-Xylene			0.200	0.2196		mg/Kg		110	70 - 130		
o-Xylene			0.100	0.1061		mg/Kg		106	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 880-31861/2-A
Matrix: Solid
Analysis Batch: 32007

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31861

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1034		mg/Kg		103	70 - 130	10	35
Toluene			0.100	0.1019		mg/Kg		102	70 - 130	0	35
Ethylbenzene			0.100	0.1052		mg/Kg		105	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2143		mg/Kg		107	70 - 130	2	35
o-Xylene			0.100	0.1038		mg/Kg		104	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: 880-17785-A-21-C MS
Matrix: Solid
Analysis Batch: 32007

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 31861

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0998	0.1199		mg/Kg		120	70 - 130		
Toluene	<0.00200	U	0.0998	0.1107		mg/Kg		111	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

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

Lab Sample ID: 880-17785-A-21-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 32007 — **Prep Batch: 31861**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U F2	0.0998	0.1129		mg/Kg		113	70 - 130
m-Xylene & p-Xylene	<0.00401	U F2	0.200	0.2330		mg/Kg		117	70 - 130
o-Xylene	<0.00200	U F2	0.0998	0.1130		mg/Kg		113	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 880-17785-A-21-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 32007 — **Prep Batch: 31861**

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	0.1101		mg/Kg		110	70 - 130	9	35
Toluene	<0.00200	U	0.100	0.08283		mg/Kg		82	70 - 130	29	35
Ethylbenzene	<0.00200	U F2	0.100	0.07374	F2	mg/Kg		73	70 - 130	42	35
m-Xylene & p-Xylene	<0.00401	U F2	0.201	0.1474	F2	mg/Kg		73	70 - 130	45	35
o-Xylene	<0.00200	U F2	0.100	0.07288	F2	mg/Kg		73	70 - 130	43	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: MB 880-32010/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 32007 — **Prep Batch: 32010**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/11/22 13:38	08/12/22 03:35	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/11/22 13:38	08/12/22 03:35	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/11/22 13:38	08/12/22 03:35	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/11/22 13:38	08/12/22 03:35	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/11/22 13:38	08/12/22 03:35	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/11/22 13:38	08/12/22 03:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*08/11/22 13:38*	*08/12/22 03:35*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*08/11/22 13:38*	*08/12/22 03:35*	*1*

Lab Sample ID: LCS 880-32010/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 32007 — **Prep Batch: 32010**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09744		mg/Kg		97	70 - 130
Toluene	0.100	0.1021		mg/Kg		102	70 - 130
Ethylbenzene	0.100	0.1056		mg/Kg		106	70 - 130
m-Xylene & p-Xylene	0.200	0.2158		mg/Kg		108	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

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

Lab Sample ID: LCS 880-32010/1-A
Matrix: Solid
Analysis Batch: 32007

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 32010

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.1072		mg/Kg		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-32010/2-A
Matrix: Solid
Analysis Batch: 32007

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 32010

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1031		mg/Kg		103	70 - 130	6	35
Toluene			0.100	0.1017		mg/Kg		102	70 - 130	0	35
Ethylbenzene			0.100	0.1052		mg/Kg		105	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.2144		mg/Kg		107	70 - 130	1	35
o-Xylene			0.100	0.1051		mg/Kg		105	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 880-17971-A-1-G MS
Matrix: Solid
Analysis Batch: 32007

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 32010

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.101	0.09791		mg/Kg		97	70 - 130		
Toluene	<0.00199	U	0.101	0.09258		mg/Kg		92	70 - 130		
Ethylbenzene	<0.00199	U	0.101	0.08611		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene	<0.00398	U	0.202	0.1721		mg/Kg		85	70 - 130		
o-Xylene	<0.00199	U	0.101	0.08436		mg/Kg		84	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-17971-A-1-H MSD
Matrix: Solid
Analysis Batch: 32007

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 32010

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	0.09717		mg/Kg		97	70 - 130	1	35
Toluene	<0.00199	U	0.100	0.09134		mg/Kg		91	70 - 130	1	35
Ethylbenzene	<0.00199	U	0.100	0.08551		mg/Kg		85	70 - 130	1	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1703		mg/Kg		85	70 - 130	1	35
o-Xylene	<0.00199	U	0.100	0.08356		mg/Kg		83	70 - 130	1	35

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

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

Lab Sample ID: 880-17971-A-1-H MSD
Matrix: Solid
Analysis Batch: 32007

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 32010

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

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

Lab Sample ID: MB 880-31770/1-A
Matrix: Solid
Analysis Batch: 31670

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31770

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		08/08/22 14:08	08/08/22 20:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/08/22 14:08	08/08/22 20:26	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/08/22 14:08	08/08/22 20:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130	08/08/22 14:08	08/08/22 20:26	1
o-Terphenyl	117		70 - 130	08/08/22 14:08	08/08/22 20:26	1

Lab Sample ID: LCS 880-31770/2-A
Matrix: Solid
Analysis Batch: 31670

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31770

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	984.0		mg/Kg		98	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1141		mg/Kg		114	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	150	S1+	70 - 130

Lab Sample ID: LCSD 880-31770/3-A
Matrix: Solid
Analysis Batch: 31670

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31770

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1015		mg/Kg		101	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	1093		mg/Kg		109	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	118		70 - 130
o-Terphenyl	142	S1+	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

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

Lab Sample ID: 820-5242-A-1-I MS
Matrix: Solid
Analysis Batch: 31670

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 31770

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	989.5		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	999	748.9		mg/Kg		75	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*90*		*70 - 130*
o-Terphenyl	*99*		*70 - 130*

Lab Sample ID: 820-5242-A-1-J MSD
Matrix: Solid
Analysis Batch: 31670

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 31770

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	919.9		mg/Kg		90	70 - 130	7	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	735.1		mg/Kg		74	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*88*		*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31858/1-A
Matrix: Solid
Analysis Batch: 31926

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			08/17/22 14:54	1

Lab Sample ID: LCS 880-31858/2-A
Matrix: Solid
Analysis Batch: 31926

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	257.0		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 880-31858/3-A
Matrix: Solid
Analysis Batch: 31926

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	257.1		mg/Kg		103	90 - 110	0	20

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-17809-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31926

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	3340	F1	2520	6300	F1	mg/Kg		118	90 - 110

Lab Sample ID: 880-17809-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31926

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	3340	F1	2520	6309	F1	mg/Kg		118	90 - 110	0	20

Lab Sample ID: 890-2732-A-1-F MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31926

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	7.85		250	276.5		mg/Kg		107	90 - 110

Lab Sample ID: 890-2732-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31926

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	7.85		250	276.4		mg/Kg		107	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

GC VOA

Prep Batch: 31861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2731-1	FS01	Total/NA	Solid	5035	
890-2731-2	FS02	Total/NA	Solid	5035	
890-2731-3	FS03	Total/NA	Solid	5035	
890-2731-4	SW01	Total/NA	Solid	5035	
890-2731-5	SW02	Total/NA	Solid	5035	
890-2731-6	SW03	Total/NA	Solid	5035	
890-2731-7	SW04	Total/NA	Solid	5035	
MB 880-31861/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31861/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31861/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17785-A-21-C MS	Matrix Spike	Total/NA	Solid	5035	
880-17785-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 32007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2731-1	FS01	Total/NA	Solid	8021B	31861
890-2731-2	FS02	Total/NA	Solid	8021B	31861
890-2731-3	FS03	Total/NA	Solid	8021B	31861
890-2731-4	SW01	Total/NA	Solid	8021B	31861
890-2731-5	SW02	Total/NA	Solid	8021B	31861
890-2731-6	SW03	Total/NA	Solid	8021B	31861
890-2731-7	SW04	Total/NA	Solid	8021B	31861
MB 880-31861/5-A	Method Blank	Total/NA	Solid	8021B	31861
MB 880-32010/5-A	Method Blank	Total/NA	Solid	8021B	32010
LCS 880-31861/1-A	Lab Control Sample	Total/NA	Solid	8021B	31861
LCS 880-32010/1-A	Lab Control Sample	Total/NA	Solid	8021B	32010
LCSD 880-31861/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31861
LCSD 880-32010/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	32010
880-17785-A-21-C MS	Matrix Spike	Total/NA	Solid	8021B	31861
880-17785-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31861
880-17971-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	32010
880-17971-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	32010

Prep Batch: 32010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-32010/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-32010/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-32010/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17971-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
880-17971-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 32078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2731-1	FS01	Total/NA	Solid	Total BTEX	
890-2731-2	FS02	Total/NA	Solid	Total BTEX	
890-2731-3	FS03	Total/NA	Solid	Total BTEX	
890-2731-4	SW01	Total/NA	Solid	Total BTEX	
890-2731-5	SW02	Total/NA	Solid	Total BTEX	
890-2731-6	SW03	Total/NA	Solid	Total BTEX	
890-2731-7	SW04	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

GC Semi VOA

Analysis Batch: 31670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2731-1	FS01	Total/NA	Solid	8015B NM	31770
890-2731-2	FS02	Total/NA	Solid	8015B NM	31770
890-2731-3	FS03	Total/NA	Solid	8015B NM	31770
890-2731-4	SW01	Total/NA	Solid	8015B NM	31770
890-2731-5	SW02	Total/NA	Solid	8015B NM	31770
890-2731-6	SW03	Total/NA	Solid	8015B NM	31770
890-2731-7	SW04	Total/NA	Solid	8015B NM	31770
MB 880-31770/1-A	Method Blank	Total/NA	Solid	8015B NM	31770
LCS 880-31770/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31770
LCSD 880-31770/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31770
820-5242-A-1-I MS	Matrix Spike	Total/NA	Solid	8015B NM	31770
820-5242-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31770

Prep Batch: 31770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2731-1	FS01	Total/NA	Solid	8015NM Prep	
890-2731-2	FS02	Total/NA	Solid	8015NM Prep	
890-2731-3	FS03	Total/NA	Solid	8015NM Prep	
890-2731-4	SW01	Total/NA	Solid	8015NM Prep	
890-2731-5	SW02	Total/NA	Solid	8015NM Prep	
890-2731-6	SW03	Total/NA	Solid	8015NM Prep	
890-2731-7	SW04	Total/NA	Solid	8015NM Prep	
MB 880-31770/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31770/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31770/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
820-5242-A-1-I MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
820-5242-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2731-1	FS01	Total/NA	Solid	8015 NM	
890-2731-2	FS02	Total/NA	Solid	8015 NM	
890-2731-3	FS03	Total/NA	Solid	8015 NM	
890-2731-4	SW01	Total/NA	Solid	8015 NM	
890-2731-5	SW02	Total/NA	Solid	8015 NM	
890-2731-6	SW03	Total/NA	Solid	8015 NM	
890-2731-7	SW04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 31858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2731-1	FS01	Soluble	Solid	DI Leach	
890-2731-2	FS02	Soluble	Solid	DI Leach	
890-2731-3	FS03	Soluble	Solid	DI Leach	
890-2731-4	SW01	Soluble	Solid	DI Leach	
890-2731-5	SW02	Soluble	Solid	DI Leach	
890-2731-6	SW03	Soluble	Solid	DI Leach	
890-2731-7	SW04	Soluble	Solid	DI Leach	
MB 880-31858/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31858/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

HPLC/IC (Continued)

Leach Batch: 31858 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-31858/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-17809-A-1-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17809-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2732-A-1-F MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2732-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2731-1	FS01	Soluble	Solid	300.0	31858
890-2731-2	FS02	Soluble	Solid	300.0	31858
890-2731-3	FS03	Soluble	Solid	300.0	31858
890-2731-4	SW01	Soluble	Solid	300.0	31858
890-2731-5	SW02	Soluble	Solid	300.0	31858
890-2731-6	SW03	Soluble	Solid	300.0	31858
890-2731-7	SW04	Soluble	Solid	300.0	31858
MB 880-31858/1-A	Method Blank	Soluble	Solid	300.0	31858
LCS 880-31858/2-A	Lab Control Sample	Soluble	Solid	300.0	31858
LCSD 880-31858/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31858
880-17809-A-1-D MS	Matrix Spike	Soluble	Solid	300.0	31858
880-17809-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31858
890-2732-A-1-F MS	Matrix Spike	Soluble	Solid	300.0	31858
890-2732-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31858

Lab Chronicle

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

Client Sample ID: FS01
Date Collected: 08/04/22 13:00
Date Received: 08/05/22 11:08

Lab Sample ID: 890-2731-1
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	31861	08/09/22 15:47	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32007	08/11/22 19:09	SM	EET MID
Total/NA	Analysis	Total BTEX		1			32078	08/12/22 10:15	SM	EET MID
Total/NA	Analysis	8015 NM		1			31838	08/09/22 09:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	31770	08/08/22 14:08	DM	EET MID
Total/NA	Analysis	8015B NM		1			31670	08/09/22 03:13	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	31858	08/09/22 15:40	AJ	EET MID
Soluble	Analysis	300.0		1			31926	08/17/22 15:57	CH	EET MID

Client Sample ID: FS02
Date Collected: 08/04/22 13:05
Date Received: 08/05/22 11:08

Lab Sample ID: 890-2731-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	31861	08/09/22 15:47	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32007	08/11/22 19:30	SM	EET MID
Total/NA	Analysis	Total BTEX		1			32078	08/12/22 10:15	SM	EET MID
Total/NA	Analysis	8015 NM		1			31838	08/09/22 09:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	31770	08/08/22 14:08	DM	EET MID
Total/NA	Analysis	8015B NM		1			31670	08/09/22 03:34	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	31858	08/09/22 15:40	AJ	EET MID
Soluble	Analysis	300.0		1			31926	08/17/22 16:05	CH	EET MID

Client Sample ID: FS03
Date Collected: 08/04/22 14:00
Date Received: 08/05/22 11:08

Lab Sample ID: 890-2731-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	31861	08/09/22 15:47	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32007	08/11/22 21:21	SM	EET MID
Total/NA	Analysis	Total BTEX		1			32078	08/12/22 10:15	SM	EET MID
Total/NA	Analysis	8015 NM		1			31838	08/09/22 09:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	31770	08/08/22 14:08	DM	EET MID
Total/NA	Analysis	8015B NM		1			31670	08/09/22 03:55	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	31858	08/09/22 15:40	AJ	EET MID
Soluble	Analysis	300.0		1			31926	08/17/22 16:28	CH	EET MID

Client Sample ID: SW01
Date Collected: 08/04/22 13:30
Date Received: 08/05/22 11:08

Lab Sample ID: 890-2731-4
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			5.00 g	5 mL	31861	08/09/22 15:47	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32007	08/11/22 21:41	SM	EET MID
Total/NA	Analysis	Total BTEX		1			32078	08/12/22 10:15	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

Client Sample ID: SW01
Date Collected: 08/04/22 13:30
Date Received: 08/05/22 11:08

Lab Sample ID: 890-2731-4
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			31838	08/09/22 09:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	31770	08/08/22 14:08	DM	EET MID
Total/NA	Analysis	8015B NM		1			31670	08/09/22 04:16	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	31858	08/09/22 15:40	AJ	EET MID
Soluble	Analysis	300.0		5			31926	08/17/22 16:36	CH	EET MID

Client Sample ID: SW02
Date Collected: 08/04/22 13:45
Date Received: 08/05/22 11:08

Lab Sample ID: 890-2731-5
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			4.97 g	5 mL	31861	08/09/22 15:47	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32007	08/11/22 22:02	SM	EET MID
Total/NA	Analysis	Total BTEX		1			32078	08/12/22 10:15	SM	EET MID
Total/NA	Analysis	8015 NM		1			31838	08/09/22 09:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	31770	08/08/22 14:08	DM	EET MID
Total/NA	Analysis	8015B NM		1			31670	08/09/22 04:37	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	31858	08/09/22 15:40	AJ	EET MID
Soluble	Analysis	300.0		1			31926	08/17/22 16:44	CH	EET MID

Client Sample ID: SW03
Date Collected: 08/04/22 13:48
Date Received: 08/05/22 11:08

Lab Sample ID: 890-2731-6
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			4.99 g	5 mL	31861	08/09/22 15:47	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32007	08/11/22 22:22	SM	EET MID
Total/NA	Analysis	Total BTEX		1			32078	08/12/22 10:15	SM	EET MID
Total/NA	Analysis	8015 NM		1			31838	08/09/22 09:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	31770	08/08/22 14:08	DM	EET MID
Total/NA	Analysis	8015B NM		1			31670	08/09/22 04:58	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	31858	08/09/22 15:40	AJ	EET MID
Soluble	Analysis	300.0		1			31926	08/17/22 16:52	CH	EET MID

Client Sample ID: SW04
Date Collected: 08/04/22 13:50
Date Received: 08/05/22 11:08

Lab Sample ID: 890-2731-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	31861	08/09/22 15:47	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	32007	08/11/22 22:43	SM	EET MID
Total/NA	Analysis	Total BTEX		1			32078	08/12/22 10:15	SM	EET MID
Total/NA	Analysis	8015 NM		1			31838	08/09/22 09:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	31770	08/08/22 14:08	DM	EET MID
Total/NA	Analysis	8015B NM		1			31670	08/09/22 05:20	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

Client Sample ID: SW04

Date Collected: 08/04/22 13:50
Date Received: 08/05/22 11:08

Lab Sample ID: 890-2731-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.96 g	50 mL	31858	08/09/22 15:40	AJ	EET MID
Soluble	Analysis	300.0		1			31926	08/17/22 17:00	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

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: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

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

Protocol References:

ASTM = ASTM International

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:

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

Sample Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2731-1
SDG: 03E1558018

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2731-1	FS01	Solid	08/04/22 13:00	08/05/22 11:08	7'
890-2731-2	FS02	Solid	08/04/22 13:05	08/05/22 11:08	7'
890-2731-3	FS03	Solid	08/04/22 14:00	08/05/22 11:08	7'
890-2731-4	SW01	Solid	08/04/22 13:30	08/05/22 11:08	0-7'
890-2731-5	SW02	Solid	08/04/22 13:45	08/05/22 11:08	0-7'
890-2731-6	SW03	Solid	08/04/22 13:48	08/05/22 11:08	0-7'
890-2731-7	SW04	Solid	08/04/22 13:50	08/05/22 11:08	0-1'

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Josh Adams	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy, Inc.
Address:	3122 National Parks Hwy.	Address:	3104 E. Green Street
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	3035178437	Email:	jadams@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:	Goldenchild CTB	Turn Around	
Project Number:	03E1558018	☑ Routine ☐ Rush	
Project Location:	Eddy County, NM	Due Date:	
Sampler's Name:	Liz Cheli	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:	Thm.007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.4
Total Containers:		Corrected Temperature:	5.2

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
FS01	S	8/4/2022	1300	7'	Comp	1		x	x	x
FS02	S	8/4/2022	1305	7'	Comp	1		x	x	x
FS03	S	8/4/2022	1400	7'	Comp	1		x	x	x
SW01	S	8/4/2022	1330	0-7'	Comp	1		x	x	x
SW02	S	8/4/2022	1345	0-7'	Comp	1		x	x	x
SW03	S	8/4/2022	1348	0-7'	Comp	1		x	x	x
SW04	S	8/4/2022	1350	0-1'	Comp	1		x	x	x

ANALYSIS REQUEST

Preservative Codes

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

Sample Comments

Incident ID: NAPP2035526230, NAPP2102237559, NAPP2101355437, & NAPP2101331137

Cost Center: 105575001

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		8.5.22 1108			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2731-1
SDG Number: 03E1558018

Login Number: 2731
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2731-1
SDG Number: 03E1558018

Login Number: 2731
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/08/22 08:34 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2715-1
Laboratory Sample Delivery Group: 03E1558018
Client Project/Site: Goldenchild CTB

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
8/12/2022 8:00:44 AM

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

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

Client: Ensolum
Project/Site: Goldenchild CTB

Laboratory Job ID: 890-2715-1
SDG: 03E1558018

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2715-1
Project/Site: Goldenchild CTB SDG: 03E1558018

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2715-1
SDG: 03E1558018

Job ID: 890-2715-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2715-1

Receipt
The sample was received on 8/3/2022 8:41 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-2706-A-1-A), (890-2706-A-1-B MS) and (890-2706-A-1-C MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-31555 and analytical batch 880-31531 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.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-31559 and analytical batch 880-31937 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.

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: Goldenchild CTB

Job ID: 890-2715-1
SDG: 03E1558018

Client Sample ID: FS13

Date Collected: 08/02/22 14:50
Date Received: 08/03/22 08:41
Sample Depth: 9'

Lab Sample ID: 890-2715-1

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		08/09/22 08:41	08/10/22 12:20	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/09/22 08:41	08/10/22 12:20	1
Ethylbenzene	**0.00299**		0.00201		mg/Kg		08/09/22 08:41	08/10/22 12:20	1
m-Xylene & p-Xylene	**0.00955**		0.00402		mg/Kg		08/09/22 08:41	08/10/22 12:20	1
o-Xylene	**0.00698**		0.00201		mg/Kg		08/09/22 08:41	08/10/22 12:20	1
Xylenes, Total	**0.0165**		0.00402		mg/Kg		08/09/22 08:41	08/10/22 12:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*08/09/22 08:41*	*08/10/22 12:20*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*08/09/22 08:41*	*08/10/22 12:20*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0195**		0.00402		mg/Kg			08/10/22 16:51	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**639**		49.8		mg/Kg			08/08/22 11:58	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		08/05/22 09:50	08/06/22 00:46	1
Diesel Range Organics (Over C10-C28)	**566**		49.8		mg/Kg		08/05/22 09:50	08/06/22 00:46	1
Oil Range Organics (Over C28-C36)	**72.7**		49.8		mg/Kg		08/05/22 09:50	08/06/22 00:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*72*		*70 - 130*	*08/05/22 09:50*	*08/06/22 00:46*	*1*
o-Terphenyl	*84*		*70 - 130*	*08/05/22 09:50*	*08/06/22 00:46*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.67**		4.95		mg/Kg			08/12/22 08:04	1

Surrogate Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2715-1
SDG: 03E1558018

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)										
880-17597-A-2-F MS	Matrix Spike	96	103										
880-17597-A-2-G MSD	Matrix Spike Duplicate	112	95										
890-2715-1	FS13	113	90										
LCS 880-31834/1-A	Lab Control Sample	99	108										
LCSD 880-31834/2-A	Lab Control Sample Dup	114	102										
MB 880-31717/5-A	Method Blank	96	95										
MB 880-31834/5-A	Method Blank	98	93										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-2706-A-1-B MS	Matrix Spike	68 S1-	67 S1-										
890-2706-A-1-C MSD	Matrix Spike Duplicate	63 S1-	65 S1-										
890-2715-1	FS13	72	84										
LCS 880-31555/2-A	Lab Control Sample	89	96										
LCSD 880-31555/3-A	Lab Control Sample Dup	89	97										
MB 880-31555/1-A	Method Blank	83	101										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2715-1
SDG: 03E1558018

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31717/5-A
Matrix: Solid
Analysis Batch: 31851

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31717

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/08/22 10:13	08/09/22 16:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/08/22 10:13	08/09/22 16:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/08/22 10:13	08/09/22 16:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/08/22 10:13	08/09/22 16:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/08/22 10:13	08/09/22 16:06	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/08/22 10:13	08/09/22 16:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*08/08/22 10:13*	*08/09/22 16:06*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*08/08/22 10:13*	*08/09/22 16:06*	*1*

Lab Sample ID: MB 880-31834/5-A
Matrix: Solid
Analysis Batch: 31851

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31834

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/09/22 08:41	08/10/22 02:52	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/09/22 08:41	08/10/22 02:52	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/09/22 08:41	08/10/22 02:52	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/09/22 08:41	08/10/22 02:52	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/09/22 08:41	08/10/22 02:52	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/09/22 08:41	08/10/22 02:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*08/09/22 08:41*	*08/10/22 02:52*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*08/09/22 08:41*	*08/10/22 02:52*	*1*

Lab Sample ID: LCS 880-31834/1-A
Matrix: Solid
Analysis Batch: 31851

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31834

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1002		mg/Kg		100	70 - 130		
Toluene			0.100	0.09582		mg/Kg		96	70 - 130		
Ethylbenzene			0.100	0.07829		mg/Kg		78	70 - 130		
m-Xylene & p-Xylene			0.200	0.1630		mg/Kg		82	70 - 130		
o-Xylene			0.100	0.08318		mg/Kg		83	70 - 130		

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

Lab Sample ID: LCSD 880-31834/2-A
Matrix: Solid
Analysis Batch: 31851

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31834

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08862		mg/Kg		89	70 - 130	12	35

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2715-1
SDG: 03E1558018

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

Lab Sample ID: LCSD 880-31834/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31851 — **Prep Batch: 31834**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1079		mg/Kg		108	70 - 130	12	35
Ethylbenzene			0.100	0.09720		mg/Kg		97	70 - 130	22	35
m-Xylene & p-Xylene			0.200	0.2134		mg/Kg		107	70 - 130	27	35
o-Xylene			0.100	0.1062		mg/Kg		106	70 - 130	24	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 880-17597-A-2-F MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31851 — **Prep Batch: 31834**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.0998	0.1058		mg/Kg		105	70 - 130
Toluene	<0.00200	U	0.0998	0.1035		mg/Kg		104	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.08434		mg/Kg		85	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1748		mg/Kg		88	70 - 130
o-Xylene	<0.00200	U	0.0998	0.08766		mg/Kg		87	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 880-17597-A-2-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31851 — **Prep Batch: 31834**

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	0.08278		mg/Kg		82	70 - 130	24	35
Toluene	<0.00200	U	0.100	0.1051		mg/Kg		105	70 - 130	2	35
Ethylbenzene	<0.00200	U	0.100	0.09458		mg/Kg		94	70 - 130	11	35
m-Xylene & p-Xylene	<0.00399	U	0.201	0.2062		mg/Kg		103	70 - 130	16	35
o-Xylene	<0.00200	U	0.100	0.1025		mg/Kg		101	70 - 130	16	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

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

Lab Sample ID: MB 880-31555/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31531 — **Prep Batch: 31555**

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		08/05/22 09:50	08/05/22 20:48	1

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2715-1
SDG: 03E1558018

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

Lab Sample ID: MB 880-31555/1-A
Matrix: Solid
Analysis Batch: 31531

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31555

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/05/22 09:50	08/05/22 20:48	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/05/22 09:50	08/05/22 20:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*08/05/22 09:50*	*08/05/22 20:48*	*1*
o-Terphenyl	*101*		*70 - 130*	*08/05/22 09:50*	*08/05/22 20:48*	*1*

Lab Sample ID: LCS 880-31555/2-A
Matrix: Solid
Analysis Batch: 31531

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31555

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	885.3		mg/Kg		89	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	874.1		mg/Kg		87	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*96*		*70 - 130*

Lab Sample ID: LCSD 880-31555/3-A
Matrix: Solid
Analysis Batch: 31531

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31555

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	855.1		mg/Kg		86	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	871.0		mg/Kg		87	70 - 130	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Lab Sample ID: 890-2706-A-1-B MS
Matrix: Solid
Analysis Batch: 31531

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 31555

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	833.2		mg/Kg		81	70 - 130		
Diesel Range Organics (Over C10-C28)	92.2	F1	999	666.4	F1	mg/Kg		57	70 - 130		

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

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2715-1
SDG: 03E1558018

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

Lab Sample ID: 890-2706-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31531 — **Prep Batch: 31555**

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	850.8		mg/Kg		83	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	92.2	F1	999	643.6	F1	mg/Kg		55	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*63*	*S1-*	*70 - 130*
o-Terphenyl	*65*	*S1-*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31559/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31937

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			08/12/22 03:46	1

Lab Sample ID: LCS 880-31559/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31937

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	245.2		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-31559/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31937

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	247.1		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-2706-A-3-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31937

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	198	F1	250	448.2		mg/Kg		100	90 - 110		

Lab Sample ID: 890-2706-A-3-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31937

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	198	F1	250	480.5	F1	mg/Kg		113	90 - 110	7	20

QC Association Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2715-1
SDG: 03E1558018

GC VOA

Prep Batch: 31717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31717/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 31834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2715-1	FS13	Total/NA	Solid	5035	
MB 880-31834/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31834/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31834/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17597-A-2-F MS	Matrix Spike	Total/NA	Solid	5035	
880-17597-A-2-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2715-1	FS13	Total/NA	Solid	8021B	31834
MB 880-31717/5-A	Method Blank	Total/NA	Solid	8021B	31717
MB 880-31834/5-A	Method Blank	Total/NA	Solid	8021B	31834
LCS 880-31834/1-A	Lab Control Sample	Total/NA	Solid	8021B	31834
LCSD 880-31834/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31834
880-17597-A-2-F MS	Matrix Spike	Total/NA	Solid	8021B	31834
880-17597-A-2-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31834

Analysis Batch: 31931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2715-1	FS13	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 31531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2715-1	FS13	Total/NA	Solid	8015B NM	31555
MB 880-31555/1-A	Method Blank	Total/NA	Solid	8015B NM	31555
LCS 880-31555/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31555
LCSD 880-31555/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31555
890-2706-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	31555
890-2706-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31555

Prep Batch: 31555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2715-1	FS13	Total/NA	Solid	8015NM Prep	
MB 880-31555/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31555/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31555/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2706-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2706-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2715-1	FS13	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2715-1
SDG: 03E1558018

HPLC/IC

Leach Batch: 31559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2715-1	FS13	Soluble	Solid	DI Leach	
MB 880-31559/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31559/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-31559/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2706-A-3-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2706-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2715-1	FS13	Soluble	Solid	300.0	31559
MB 880-31559/1-A	Method Blank	Soluble	Solid	300.0	31559
LCS 880-31559/2-A	Lab Control Sample	Soluble	Solid	300.0	31559
LCSD 880-31559/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31559
890-2706-A-3-C MS	Matrix Spike	Soluble	Solid	300.0	31559
890-2706-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31559

Lab Chronicle

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2715-1
SDG: 03E1558018

Client Sample ID: FS13

Date Collected: 08/02/22 14:50
Date Received: 08/03/22 08:41

Lab Sample ID: 890-2715-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	31834	08/09/22 08:41	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31851	08/10/22 12:20	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31931	08/10/22 16:51	SM	EET MID
Total/NA	Analysis	8015 NM		1			31755	08/08/22 11:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	31555	08/05/22 09:50	DM	EET MID
Total/NA	Analysis	8015B NM		1			31531	08/06/22 00:46	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	31559	08/05/22 10:29	CH	EET MID
Soluble	Analysis	300.0		1			31937	08/12/22 08:04	AJ	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2715-1
SDG: 03E1558018

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: Goldenchild CTB

Job ID: 890-2715-1
SDG: 03E1558018

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

Protocol References:

ASTM = ASTM International

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:

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

Sample Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2715-1
SDG: 03E1558018

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2715-1	FS13	Solid	08/02/22 14:50	08/03/22 08:41	9'

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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:	Kalie Jennings	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	817-683-2503	Email:	Kjennings@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:	Goldenchild CTB	Turn Around	☒ Routine ☐ Rush
Project Number:	03E1558018	Due Date:	
Project Location:	Eddy County, NM	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Josh Adams		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	Yes (No)
Samples Received Intact:	(Yes) No	Thermometer ID:	IWM-007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	6.0
Total Containers:		Corrected Temperature:	5.8

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	BTEX (8021)	TPH (8015)	Chloride (300.0)
FS13	soil	8-2-22	1450	9	Comp	1	X	X	X

890-2715 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

Cost Center:
1055751001

Incident Number:
NAPP2035256230
NAPP2102237559
NAPP2101335437
NAPP2101331137

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	Josh Adams		8.3.22 841			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2715-1
SDG Number: 03E1558018

Login Number: 2715
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2715-1
SDG Number: 03E1558018

Login Number: 2715
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/04/22 10:22 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2716-1
Laboratory Sample Delivery Group: 03E1558018
Client Project/Site: Goldenchild CTB

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
8/12/2022 8:00:52 AM

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

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

Client: Ensolum
Project/Site: Goldenchild CTB

Laboratory Job ID: 890-2716-1
SDG: 03E1558018

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2716-1
Project/Site: Goldenchild CTB SDG: 03E1558018

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2716-1
SDG: 03E1558018

Job ID: 890-2716-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2716-1

Receipt
The sample was received on 8/3/2022 8:41 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-31767/1-A) and (LCSD 880-31767/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-2704-A-1-I MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SW39 (890-2716-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-31767 and analytical batch 880-31850 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: Surrogate recovery for the following samples were outside control limits: (890-2706-A-1-A), (890-2706-A-1-B MS) and (890-2706-A-1-C MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-31555 and analytical batch 880-31531 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.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-31559 and analytical batch 880-31937 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.

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: Goldenchild CTB

Job ID: 890-2716-1
SDG: 03E1558018

Client Sample ID: SW39

Date Collected: 08/02/22 14:55
Date Received: 08/03/22 08:41
Sample Depth: 0-9'

Lab Sample ID: 890-2716-1

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		08/08/22 13:00	08/10/22 17:20	1
Toluene	<0.00202	U	0.00202		mg/Kg		08/08/22 13:00	08/10/22 17:20	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		08/08/22 13:00	08/10/22 17:20	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		08/08/22 13:00	08/10/22 17:20	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		08/08/22 13:00	08/10/22 17:20	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		08/08/22 13:00	08/10/22 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*145*	*S1+*	*70 - 130*	*08/08/22 13:00*	*08/10/22 17:20*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*08/08/22 13:00*	*08/10/22 17:20*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			08/11/22 11:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**537**		50.0		mg/Kg			08/08/22 11:58	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		08/05/22 09:50	08/06/22 01:08	1
Diesel Range Organics (Over C10-C28)	**466**		50.0		mg/Kg		08/05/22 09:50	08/06/22 01:08	1
Oil Range Organics (Over C28-C36)	**71.2**		50.0		mg/Kg		08/05/22 09:50	08/06/22 01:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*08/05/22 09:50*	*08/06/22 01:08*	*1*
o-Terphenyl	*101*		*70 - 130*	*08/05/22 09:50*	*08/06/22 01:08*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**45.1**		4.96		mg/Kg			08/12/22 08:14	1

Surrogate Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2716-1
SDG: 03E1558018

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)										
890-2704-A-1-H MS	Matrix Spike	130	85										
890-2704-A-1-I MSD	Matrix Spike Duplicate	140 S1+	84										
890-2716-1	SW39	145 S1+	75										
LCS 880-31767/1-A	Lab Control Sample	136 S1+	81										
LCSD 880-31767/2-A	Lab Control Sample Dup	131 S1+	84										
MB 880-31767/5-A	Method Blank	103	75										
MB 880-31850/8	Method Blank	99	77										

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)										
890-2706-A-1-B MS	Matrix Spike	68 S1-	67 S1-										
890-2706-A-1-C MSD	Matrix Spike Duplicate	63 S1-	65 S1-										
890-2716-1	SW39	89	101										
LCS 880-31555/2-A	Lab Control Sample	89	96										
LCSD 880-31555/3-A	Lab Control Sample Dup	89	97										
MB 880-31555/1-A	Method Blank	83	101										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2716-1
SDG: 03E1558018

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31767/5-A
Matrix: Solid
Analysis Batch: 31850

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31767

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/08/22 13:00	08/10/22 06:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/08/22 13:00	08/10/22 06:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/08/22 13:00	08/10/22 06:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/08/22 13:00	08/10/22 06:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/08/22 13:00	08/10/22 06:38	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/08/22 13:00	08/10/22 06:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*08/08/22 13:00*	*08/10/22 06:38*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*08/08/22 13:00*	*08/10/22 06:38*	*1*

Lab Sample ID: LCS 880-31767/1-A
Matrix: Solid
Analysis Batch: 31850

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31767

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08434		mg/Kg		84	70 - 130		
Toluene			0.100	0.08825		mg/Kg		88	70 - 130		
Ethylbenzene			0.100	0.08741		mg/Kg		87	70 - 130		
m-Xylene & p-Xylene			0.200	0.1767		mg/Kg		88	70 - 130		
o-Xylene			0.100	0.09757		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*136*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*

Lab Sample ID: LCSD 880-31767/2-A
Matrix: Solid
Analysis Batch: 31850

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31767

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08734		mg/Kg		87	70 - 130	3	35
Toluene			0.100	0.08876		mg/Kg		89	70 - 130	1	35
Ethylbenzene			0.100	0.08917		mg/Kg		89	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.1831		mg/Kg		92	70 - 130	4	35
o-Xylene			0.100	0.09964		mg/Kg		100	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*

Lab Sample ID: 890-2704-A-1-H MS
Matrix: Solid
Analysis Batch: 31850

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 31767

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U F1	0.100	0.09552		mg/Kg		95	70 - 130		
Toluene	<0.00199	U	0.100	0.09509		mg/Kg		95	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2716-1
SDG: 03E1558018

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

Lab Sample ID: 890-2704-A-1-H MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31850 — **Prep Batch: 31767**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.100	0.09336		mg/Kg		93	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.201	0.1888		mg/Kg		94	70 - 130
o-Xylene	<0.00199	U	0.100	0.1014		mg/Kg		101	70 - 130

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

Lab Sample ID: 890-2704-A-1-I MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31850 — **Prep Batch: 31767**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.0998	0.06812	F1	mg/Kg		68	70 - 130	33	35
Toluene	<0.00199	U	0.0998	0.07008		mg/Kg		70	70 - 130	30	35
Ethylbenzene	<0.00199	U	0.0998	0.07097		mg/Kg		71	70 - 130	27	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1453		mg/Kg		73	70 - 130	26	35
o-Xylene	<0.00199	U	0.0998	0.08021		mg/Kg		80	70 - 130	23	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*140*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*

Lab Sample ID: MB 880-31850/8 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31850

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg			08/09/22 16:48	1
Toluene	<0.00200	U	0.00200	mg/Kg			08/09/22 16:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg			08/09/22 16:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg			08/09/22 16:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg			08/09/22 16:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg			08/09/22 16:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*08/09/22 16:48*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*		*08/09/22 16:48*	*1*

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

Lab Sample ID: MB 880-31555/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31531 — **Prep Batch: 31555**

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		08/05/22 09:50	08/05/22 20:48	1

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2716-1
SDG: 03E1558018

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

Lab Sample ID: MB 880-31555/1-A
Matrix: Solid
Analysis Batch: 31531

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31555

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/05/22 09:50	08/05/22 20:48	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/05/22 09:50	08/05/22 20:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*08/05/22 09:50*	*08/05/22 20:48*	*1*
o-Terphenyl	*101*		*70 - 130*	*08/05/22 09:50*	*08/05/22 20:48*	*1*

Lab Sample ID: LCS 880-31555/2-A
Matrix: Solid
Analysis Batch: 31531

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31555

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	885.3		mg/Kg		89	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	874.1		mg/Kg		87	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*96*		*70 - 130*

Lab Sample ID: LCSD 880-31555/3-A
Matrix: Solid
Analysis Batch: 31531

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31555

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	855.1		mg/Kg		86	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	871.0		mg/Kg		87	70 - 130	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Lab Sample ID: 890-2706-A-1-B MS
Matrix: Solid
Analysis Batch: 31531

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 31555

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	833.2		mg/Kg		81	70 - 130		
Diesel Range Organics (Over C10-C28)	92.2	F1	999	666.4	F1	mg/Kg		57	70 - 130		

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

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2716-1
SDG: 03E1558018

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

Lab Sample ID: 890-2706-A-1-C MSD
Matrix: Solid
Analysis Batch: 31531

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 31555

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	850.8		mg/Kg		83	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	92.2	F1	999	643.6	F1	mg/Kg		55	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*63*	*S1-*	*70 - 130*
o-Terphenyl	*65*	*S1-*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31559/1-A
Matrix: Solid
Analysis Batch: 31937

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			08/12/22 03:46	1

Lab Sample ID: LCS 880-31559/2-A
Matrix: Solid
Analysis Batch: 31937

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	245.2		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-31559/3-A
Matrix: Solid
Analysis Batch: 31937

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	247.1		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-2706-A-3-C MS
Matrix: Solid
Analysis Batch: 31937

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	198	F1	250	448.2		mg/Kg		100	90 - 110		

Lab Sample ID: 890-2706-A-3-D MSD
Matrix: Solid
Analysis Batch: 31937

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	198	F1	250	480.5	F1	mg/Kg		113	90 - 110	7	20

QC Association Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2716-1
SDG: 03E1558018

GC VOA

Prep Batch: 31767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2716-1	SW39	Total/NA	Solid	5035	
MB 880-31767/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31767/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31767/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2704-A-1-H MS	Matrix Spike	Total/NA	Solid	5035	
890-2704-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2716-1	SW39	Total/NA	Solid	8021B	31767
MB 880-31767/5-A	Method Blank	Total/NA	Solid	8021B	31767
MB 880-31850/8	Method Blank	Total/NA	Solid	8021B	
LCS 880-31767/1-A	Lab Control Sample	Total/NA	Solid	8021B	31767
LCSD 880-31767/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31767
890-2704-A-1-H MS	Matrix Spike	Total/NA	Solid	8021B	31767
890-2704-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31767

Analysis Batch: 31998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2716-1	SW39	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 31531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2716-1	SW39	Total/NA	Solid	8015B NM	31555
MB 880-31555/1-A	Method Blank	Total/NA	Solid	8015B NM	31555
LCS 880-31555/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31555
LCSD 880-31555/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31555
890-2706-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	31555
890-2706-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31555

Prep Batch: 31555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2716-1	SW39	Total/NA	Solid	8015NM Prep	
MB 880-31555/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31555/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31555/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2706-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2706-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2716-1	SW39	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 31559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2716-1	SW39	Soluble	Solid	DI Leach	
MB 880-31559/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31559/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2716-1
SDG: 03E1558018

HPLC/IC (Continued)

Leach Batch: 31559 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-31559/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2706-A-3-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2706-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2716-1	SW39	Soluble	Solid	300.0	31559
MB 880-31559/1-A	Method Blank	Soluble	Solid	300.0	31559
LCS 880-31559/2-A	Lab Control Sample	Soluble	Solid	300.0	31559
LCSD 880-31559/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31559
890-2706-A-3-C MS	Matrix Spike	Soluble	Solid	300.0	31559
890-2706-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31559

Lab Chronicle

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2716-1
SDG: 03E1558018

Client Sample ID: SW39

Date Collected: 08/02/22 14:55
Date Received: 08/03/22 08:41

Lab Sample ID: 890-2716-1

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			4.96 g	5 mL	31767	08/08/22 13:00	MR	EET MID
Total/NA	Analysis	8021B		1			31850	08/10/22 17:20	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31998	08/11/22 11:16	SM	EET MID
Total/NA	Analysis	8015 NM		1			31756	08/08/22 11:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31555	08/05/22 09:50	DM	EET MID
Total/NA	Analysis	8015B NM		1			31531	08/06/22 01:08	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	31559	08/05/22 10:29	CH	EET MID
Soluble	Analysis	300.0		1			31937	08/12/22 08:14	AJ	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2716-1
SDG: 03E1558018

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: Goldenchild CTB

Job ID: 890-2716-1
SDG: 03E1558018

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

Protocol References:

ASTM = ASTM International

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:

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

Sample Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2716-1
SDG: 03E1558018

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2716-1	SW39	Solid	08/02/22 14:55	08/03/22 08:41	0-9'

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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:	Kalie Jennings	Bill to: (if different)	Garett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	817-683-2503 Email:		Kjennings@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:	Golden Child CTB	Turn Around	
Project Number:	03E1558018	☒ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Josh Adams	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:	TUM_007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	6.0
Total Containers:		Corrected Temperature:	5.8

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX (8021)	TPH (8015)	Chloride (300.0)	Sample Comments
SW39	soil	8-2-22	1455	0-9'	comp	1		X	X	X	Cost Center: 1055751001
FS											Incident Number: NAPP2203525630 NAPP2102237559 NAPP2101335437 NAPP2101331137

890-2716 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		8.3.22 84	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2716-1
SDG Number: 03E1558018

Login Number: 2716
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	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: 890-2716-1
SDG Number: 03E1558018

Login Number: 2716
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/04/22 10:22 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2725-1
Laboratory Sample Delivery Group: 03E1558015
Client Project/Site: Goldenchild CTB

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
8/12/2022 7:18:30 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: Goldenchild CTB

Laboratory Job ID: 890-2725-1
SDG: 03E1558015

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2725-1
Project/Site: Goldenchild CTB SDG: 03E1558015

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
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: Goldenchild CTB

Job ID: 890-2725-1
SDG: 03E1558015

Job ID: 890-2725-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2725-1

Receipt
The sample was received on 8/4/2022 8:21 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

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

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

HPLC/IC
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: Goldenchild CTB

Job ID: 890-2725-1
SDG: 03E1558015

Client Sample ID: SW42

Date Collected: 08/03/22 15:45
Date Received: 08/04/22 08:21
Sample Depth: 0 - 9

Lab Sample ID: 890-2725-1

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		08/09/22 14:20	08/10/22 23:51	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/09/22 14:20	08/10/22 23:51	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/09/22 14:20	08/10/22 23:51	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/09/22 14:20	08/10/22 23:51	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/09/22 14:20	08/10/22 23:51	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/09/22 14:20	08/10/22 23:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*08/09/22 14:20*	*08/10/22 23:51*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*08/09/22 14:20*	*08/10/22 23:51*	*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			08/11/22 10:57	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			08/08/22 12:38	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		08/05/22 11:58	08/06/22 23:09	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		08/05/22 11:58	08/06/22 23:09	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/05/22 11:58	08/06/22 23:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*08/05/22 11:58*	*08/06/22 23:09*	*1*
o-Terphenyl	*105*		*70 - 130*	*08/05/22 11:58*	*08/06/22 23:09*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**286**		5.01		mg/Kg			08/11/22 18:15	1

Surrogate Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2725-1
SDG: 03E1558015

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)										
890-2717-A-1-H MS	Matrix Spike	104	93										
890-2717-A-1-I MSD	Matrix Spike Duplicate	103	94										
890-2725-1	SW42	117	88										
LCS 880-31852/1-A	Lab Control Sample	104	93										
LCSD 880-31852/2-A	Lab Control Sample Dup	117	93										
MB 880-31852/5-A	Method Blank	100	87										
MB 880-31859/5-A	Method Blank	99	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)										
890-2723-A-1-C MS	Matrix Spike	89	90										
890-2723-A-1-D MSD	Matrix Spike Duplicate	89	91										
890-2725-1	SW42	89	105										
LCS 880-31577/2-A	Lab Control Sample	93	96										
LCSD 880-31577/3-A	Lab Control Sample Dup	91	95										
MB 880-31577/1-A	Method Blank	89	107										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2725-1
SDG: 03E1558015

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31852/5-A
Matrix: Solid
Analysis Batch: 31883

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31852

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/09/22 14:20	08/10/22 23:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/09/22 14:20	08/10/22 23:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/09/22 14:20	08/10/22 23:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/09/22 14:20	08/10/22 23:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/09/22 14:20	08/10/22 23:09	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/09/22 14:20	08/10/22 23:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*08/09/22 14:20*	*08/10/22 23:09*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*08/09/22 14:20*	*08/10/22 23:09*	*1*

Lab Sample ID: LCS 880-31852/1-A
Matrix: Solid
Analysis Batch: 31883

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31852

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.07639		mg/Kg		76	70 - 130		
Toluene			0.100	0.07711		mg/Kg		77	70 - 130		
Ethylbenzene			0.100	0.08089		mg/Kg		81	70 - 130		
m-Xylene & p-Xylene			0.200	0.1645		mg/Kg		82	70 - 130		
o-Xylene			0.100	0.09143		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: LCSD 880-31852/2-A
Matrix: Solid
Analysis Batch: 31883

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31852

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.07451		mg/Kg		75	70 - 130	2	35
Toluene			0.100	0.07796		mg/Kg		78	70 - 130	1	35
Ethylbenzene			0.100	0.08436		mg/Kg		84	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1738		mg/Kg		87	70 - 130	6	35
o-Xylene			0.100	0.09756		mg/Kg		98	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: 890-2717-A-1-H MS
Matrix: Solid
Analysis Batch: 31883

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 31852

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.100	0.09566		mg/Kg		95	70 - 130		
Toluene	<0.00201	U	0.100	0.09695		mg/Kg		96	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2725-1
SDG: 03E1558015

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

Lab Sample ID: 890-2717-A-1-H MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31883 — **Prep Batch: 31852**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.100	0.1007		mg/Kg		100	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.201	0.2015		mg/Kg		100	70 - 130
o-Xylene	<0.00201	U	0.100	0.1109		mg/Kg		110	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: 890-2717-A-1-I MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31883 — **Prep Batch: 31852**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0998	0.09159		mg/Kg		92	70 - 130	4	35
Toluene	<0.00201	U	0.0998	0.09133		mg/Kg		91	70 - 130	6	35
Ethylbenzene	<0.00201	U	0.0998	0.09450		mg/Kg		95	70 - 130	6	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1903		mg/Kg		95	70 - 130	6	35
o-Xylene	<0.00201	U	0.0998	0.1047		mg/Kg		105	70 - 130	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: MB 880-31859/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31883 — **Prep Batch: 31859**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/09/22 15:44	08/10/22 12:32	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/09/22 15:44	08/10/22 12:32	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/09/22 15:44	08/10/22 12:32	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/09/22 15:44	08/10/22 12:32	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/09/22 15:44	08/10/22 12:32	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/09/22 15:44	08/10/22 12:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*08/09/22 15:44*	*08/10/22 12:32*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*08/09/22 15:44*	*08/10/22 12:32*	*1*

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

Lab Sample ID: MB 880-31577/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31631 — **Prep Batch: 31577**

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		08/05/22 11:58	08/06/22 20:38	1

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2725-1
SDG: 03E1558015

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

Lab Sample ID: MB 880-31577/1-A
Matrix: Solid
Analysis Batch: 31631

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31577

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/05/22 11:58	08/06/22 20:38	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/05/22 11:58	08/06/22 20:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*08/05/22 11:58*	*08/06/22 20:38*	*1*
o-Terphenyl	*107*		*70 - 130*	*08/05/22 11:58*	*08/06/22 20:38*	*1*

Lab Sample ID: LCS 880-31577/2-A
Matrix: Solid
Analysis Batch: 31631

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31577

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	922.7		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	901.7		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*96*		*70 - 130*

Lab Sample ID: LCSD 880-31577/3-A
Matrix: Solid
Analysis Batch: 31631

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31577

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	905.4		mg/Kg		91	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	879.0		mg/Kg		88	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*91*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Lab Sample ID: 890-2723-A-1-C MS
Matrix: Solid
Analysis Batch: 31631

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 31577

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	1016		mg/Kg		100	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	962.5		mg/Kg		94	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*90*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2725-1
SDG: 03E1558015

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

Lab Sample ID: 890-2723-A-1-D MSD
Matrix: Solid
Analysis Batch: 31631

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 31577

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	1031		mg/Kg		101	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	981.9		mg/Kg		96	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31560/1-A
Matrix: Solid
Analysis Batch: 31932

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			08/11/22 13:38	1

Lab Sample ID: LCS 880-31560/2-A
Matrix: Solid
Analysis Batch: 31932

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	248.4		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-31560/3-A
Matrix: Solid
Analysis Batch: 31932

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	248.0		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 890-2722-A-12-B MS
Matrix: Solid
Analysis Batch: 31932

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	200		250	458.6		mg/Kg		104	90 - 110		

Lab Sample ID: 890-2722-A-12-C MSD
Matrix: Solid
Analysis Batch: 31932

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	200		250	475.0		mg/Kg		110	90 - 110	4	20

QC Association Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2725-1
SDG: 03E1558015

GC VOA

Prep Batch: 31852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2725-1	SW42	Total/NA	Solid	5035	
MB 880-31852/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31852/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31852/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2717-A-1-H MS	Matrix Spike	Total/NA	Solid	5035	
890-2717-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 31859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31859/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 31883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2725-1	SW42	Total/NA	Solid	8021B	31852
MB 880-31852/5-A	Method Blank	Total/NA	Solid	8021B	31852
MB 880-31859/5-A	Method Blank	Total/NA	Solid	8021B	31859
LCS 880-31852/1-A	Lab Control Sample	Total/NA	Solid	8021B	31852
LCSD 880-31852/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31852
890-2717-A-1-H MS	Matrix Spike	Total/NA	Solid	8021B	31852
890-2717-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31852

Analysis Batch: 31992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2725-1	SW42	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 31577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2725-1	SW42	Total/NA	Solid	8015NM Prep	
MB 880-31577/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31577/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31577/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2723-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2723-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2725-1	SW42	Total/NA	Solid	8015B NM	31577
MB 880-31577/1-A	Method Blank	Total/NA	Solid	8015B NM	31577
LCS 880-31577/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31577
LCSD 880-31577/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31577
890-2723-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	31577
890-2723-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31577

Analysis Batch: 31762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2725-1	SW42	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2725-1
SDG: 03E1558015

HPLC/IC

Leach Batch: 31560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2725-1	SW42	Soluble	Solid	DI Leach	
MB 880-31560/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31560/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-31560/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2722-A-12-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2722-A-12-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2725-1	SW42	Soluble	Solid	300.0	31560
MB 880-31560/1-A	Method Blank	Soluble	Solid	300.0	31560
LCS 880-31560/2-A	Lab Control Sample	Soluble	Solid	300.0	31560
LCSD 880-31560/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31560
890-2722-A-12-B MS	Matrix Spike	Soluble	Solid	300.0	31560
890-2722-A-12-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31560

Lab Chronicle

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2725-1
SDG: 03E1558015

Client Sample ID: SW42

Date Collected: 08/03/22 15:45
Date Received: 08/04/22 08:21

Lab Sample ID: 890-2725-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	31852	08/09/22 14:20	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31883	08/10/22 23:51	SM	EET MID
Total/NA	Analysis	Total BTEX		1			31992	08/11/22 10:57	SM	EET MID
Total/NA	Analysis	8015 NM		1			31762	08/08/22 12:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	31577	08/05/22 11:58	DM	EET MID
Total/NA	Analysis	8015B NM		1			31631	08/06/22 23:09	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	31560	08/05/22 10:32	CH	EET MID
Soluble	Analysis	300.0		1			31932	08/11/22 18:15	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2725-1
SDG: 03E1558015

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: Goldenchild CTB

Job ID: 890-2725-1
SDG: 03E1558015

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

Protocol References:

ASTM = ASTM International

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:

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

Sample Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2725-1
SDG: 03E1558015

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2725-1	SW42	Solid	08/03/22 15:45	08/04/22 08:21	0 - 9

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Kalei Jennings	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 East Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	kjennings@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:	Goldenchild CTB	Turn Around	
Project Number:	03E1558015	☑ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Conner Shore	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:	3.4
Total Containers:		Corrected Temperature:	3.2

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SW42	S	08.03.22	1545	0-9'	C	1		x	x	x

Parameters

890-2725 Chain of Custody

Preservative Codes

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

Sample Comments

INCIDENT NUMBER: NAPP2035526230, NAPP2102237559, NAPP2101355437, & NAPP2101331137

Cost Center: 105575001

AFE:

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		8.4.22821	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2725-1
SDG Number: 03E1558015

Login Number: 2725
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: 890-2725-1
SDG Number: 03E1558015

Login Number: 2725
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/05/22 10:35 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2726-1
Laboratory Sample Delivery Group: 03E1558015
Client Project/Site: Goldenchild CTB

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
8/12/2022 7:18:48 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: Goldenchild CTB

Laboratory Job ID: 890-2726-1
SDG: 03E1558015

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2726-1
SDG: 03E1558015

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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: Goldenchild CTB

Job ID: 890-2726-1
SDG: 03E1558015

Job ID: 890-2726-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2726-1

Receipt
The samples were received on 8/4/2022 8:21 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-31767/1-A) and (LCSD 880-31767/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-2704-A-1-I MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS14 (890-2726-2) and SW41 (890-2726-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-31767 and analytical batch 880-31850 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
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: Goldenchild CTB

Job ID: 890-2726-1
SDG: 03E1558015

Client Sample ID: SW40

Lab Sample ID: 890-2726-1
Matrix: Solid
Date Collected: 08/03/22 10:55
Date Received: 08/04/22 08:21
Sample Depth: 0 - 9

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/08/22 13:00	08/10/22 17:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/08/22 13:00	08/10/22 17:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/08/22 13:00	08/10/22 17:46	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		08/08/22 13:00	08/10/22 17:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/08/22 13:00	08/10/22 17:46	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		08/08/22 13:00	08/10/22 17:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*	*08/08/22 13:00*	*08/10/22 17:46*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*08/08/22 13:00*	*08/10/22 17:46*	*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			08/11/22 11:16	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			08/08/22 12:38	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		08/05/22 11:58	08/06/22 23:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/05/22 11:58	08/06/22 23:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/05/22 11:58	08/06/22 23:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*08/05/22 11:58*	*08/06/22 23:31*	*1*
o-Terphenyl	*121*		*70 - 130*	*08/05/22 11:58*	*08/06/22 23:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**30.9**		5.05		mg/Kg			08/11/22 18:24	1

Client Sample ID: FS14

Lab Sample ID: 890-2726-2
Matrix: Solid
Date Collected: 08/03/22 15:50
Date Received: 08/04/22 08:21
Sample Depth: 9

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/08/22 13:00	08/10/22 18:13	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/08/22 13:00	08/10/22 18:13	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/08/22 13:00	08/10/22 18:13	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/08/22 13:00	08/10/22 18:13	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/08/22 13:00	08/10/22 18:13	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/08/22 13:00	08/10/22 18:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*133*	*S1+*	*70 - 130*	*08/08/22 13:00*	*08/10/22 18:13*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2726-1
SDG: 03E1558015

Client Sample ID: FS14

Lab Sample ID: 890-2726-2
Matrix: Solid
Date Collected: 08/03/22 15:50
Date Received: 08/04/22 08:21
Sample Depth: 9

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*08/08/22 13:00*	*08/10/22 18:13*	*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			08/11/22 11:16	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			08/08/22 12:38	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		08/05/22 11:58	08/06/22 23:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/05/22 11:58	08/06/22 23:52	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/05/22 11:58	08/06/22 23:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*101*		*70 - 130*	*08/05/22 11:58*	*08/06/22 23:52*	*1*
o-Terphenyl	*121*		*70 - 130*	*08/05/22 11:58*	*08/06/22 23:52*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.08**		4.97	mg/Kg			08/11/22 18:33	1

Client Sample ID: SW41

Lab Sample ID: 890-2726-3
Matrix: Solid
Date Collected: 08/03/22 15:40
Date Received: 08/04/22 08:21
Sample Depth: 0 - 9

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		08/08/22 13:00	08/10/22 18:39	1
Toluene	<0.00199	U	0.00199	mg/Kg		08/08/22 13:00	08/10/22 18:39	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		08/08/22 13:00	08/10/22 18:39	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		08/08/22 13:00	08/10/22 18:39	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		08/08/22 13:00	08/10/22 18:39	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		08/08/22 13:00	08/10/22 18:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*148*	*S1+*	*70 - 130*	*08/08/22 13:00*	*08/10/22 18:39*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*08/08/22 13:00*	*08/10/22 18:39*	*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			08/11/22 11:16	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			08/08/22 12:38	1

Client Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2726-1
SDG: 03E1558015

Client Sample ID: SW41

Date Collected: 08/03/22 15:40
Date Received: 08/04/22 08:21
Sample Depth: 0 - 9

Lab Sample ID: 890-2726-3

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		08/05/22 11:58	08/07/22 00:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/05/22 11:58	08/07/22 00:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/05/22 11:58	08/07/22 00:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*08/05/22 11:58*	*08/07/22 00:13*	*1*
o-Terphenyl	*114*		*70 - 130*	*08/05/22 11:58*	*08/07/22 00:13*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**31.4**		5.00		mg/Kg			08/11/22 18:43	1

Surrogate Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2726-1
SDG: 03E1558015

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)										
890-2704-A-1-H MS	Matrix Spike	130	85										
890-2704-A-1-I MSD	Matrix Spike Duplicate	140 S1+	84										
890-2726-1	SW40	129	77										
890-2726-2	FS14	133 S1+	81										
890-2726-3	SW41	148 S1+	82										
LCS 880-31767/1-A	Lab Control Sample	136 S1+	81										
LCSD 880-31767/2-A	Lab Control Sample Dup	131 S1+	84										
MB 880-31767/5-A	Method Blank	103	75										
MB 880-31850/8	Method Blank	99	77										

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)										
890-2723-A-1-C MS	Matrix Spike	89	90										
890-2723-A-1-D MSD	Matrix Spike Duplicate	89	91										
890-2726-1	SW40	98	121										
890-2726-2	FS14	101	121										
890-2726-3	SW41	96	114										
LCS 880-31577/2-A	Lab Control Sample	93	96										
LCSD 880-31577/3-A	Lab Control Sample Dup	91	95										
MB 880-31577/1-A	Method Blank	89	107										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2726-1
SDG: 03E1558015

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31767/5-A
Matrix: Solid
Analysis Batch: 31850

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31767

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/08/22 13:00	08/10/22 06:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/08/22 13:00	08/10/22 06:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/08/22 13:00	08/10/22 06:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/08/22 13:00	08/10/22 06:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/08/22 13:00	08/10/22 06:38	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/08/22 13:00	08/10/22 06:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*08/08/22 13:00*	*08/10/22 06:38*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*08/08/22 13:00*	*08/10/22 06:38*	*1*

Lab Sample ID: LCS 880-31767/1-A
Matrix: Solid
Analysis Batch: 31850

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31767

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08434		mg/Kg		84	70 - 130		
Toluene			0.100	0.08825		mg/Kg		88	70 - 130		
Ethylbenzene			0.100	0.08741		mg/Kg		87	70 - 130		
m-Xylene & p-Xylene			0.200	0.1767		mg/Kg		88	70 - 130		
o-Xylene			0.100	0.09757		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*136*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*

Lab Sample ID: LCSD 880-31767/2-A
Matrix: Solid
Analysis Batch: 31850

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31767

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08734		mg/Kg		87	70 - 130	3	35
Toluene			0.100	0.08876		mg/Kg		89	70 - 130	1	35
Ethylbenzene			0.100	0.08917		mg/Kg		89	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.1831		mg/Kg		92	70 - 130	4	35
o-Xylene			0.100	0.09964		mg/Kg		100	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*

Lab Sample ID: 890-2704-A-1-H MS
Matrix: Solid
Analysis Batch: 31850

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 31767

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U F1	0.100	0.09552		mg/Kg		95	70 - 130		
Toluene	<0.00199	U	0.100	0.09509		mg/Kg		95	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2726-1
SDG: 03E1558015

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

Lab Sample ID: 890-2704-A-1-H MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31850 — **Prep Batch: 31767**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.100	0.09336		mg/Kg		93	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.201	0.1888		mg/Kg		94	70 - 130
o-Xylene	<0.00199	U	0.100	0.1014		mg/Kg		101	70 - 130

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

Lab Sample ID: 890-2704-A-1-I MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31850 — **Prep Batch: 31767**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.0998	0.06812	F1	mg/Kg		68	70 - 130	33	35
Toluene	<0.00199	U	0.0998	0.07008		mg/Kg		70	70 - 130	30	35
Ethylbenzene	<0.00199	U	0.0998	0.07097		mg/Kg		71	70 - 130	27	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1453		mg/Kg		73	70 - 130	26	35
o-Xylene	<0.00199	U	0.0998	0.08021		mg/Kg		80	70 - 130	23	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*140*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*

Lab Sample ID: MB 880-31850/8 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31850

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg			08/09/22 16:48	1
Toluene	<0.00200	U	0.00200	mg/Kg			08/09/22 16:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg			08/09/22 16:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg			08/09/22 16:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg			08/09/22 16:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg			08/09/22 16:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*08/09/22 16:48*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*		*08/09/22 16:48*	*1*

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

Lab Sample ID: MB 880-31577/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31631 — **Prep Batch: 31577**

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		08/05/22 11:58	08/06/22 20:38	1

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2726-1
SDG: 03E1558015

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

Lab Sample ID: MB 880-31577/1-A
Matrix: Solid
Analysis Batch: 31631

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31577

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/05/22 11:58	08/06/22 20:38	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/05/22 11:58	08/06/22 20:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*08/05/22 11:58*	*08/06/22 20:38*	*1*
o-Terphenyl	*107*		*70 - 130*	*08/05/22 11:58*	*08/06/22 20:38*	*1*

Lab Sample ID: LCS 880-31577/2-A
Matrix: Solid
Analysis Batch: 31631

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31577

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	922.7		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	901.7		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*96*		*70 - 130*

Lab Sample ID: LCSD 880-31577/3-A
Matrix: Solid
Analysis Batch: 31631

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31577

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	905.4		mg/Kg		91	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	879.0		mg/Kg		88	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*91*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Lab Sample ID: 890-2723-A-1-C MS
Matrix: Solid
Analysis Batch: 31631

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 31577

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	1016		mg/Kg		100	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	962.5		mg/Kg		94	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*90*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2726-1
SDG: 03E1558015

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

Lab Sample ID: 890-2723-A-1-D MSD
Matrix: Solid
Analysis Batch: 31631

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 31577

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	1031		mg/Kg		101	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	981.9		mg/Kg		96	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31560/1-A
Matrix: Solid
Analysis Batch: 31932

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			08/11/22 13:38	1

Lab Sample ID: LCS 880-31560/2-A
Matrix: Solid
Analysis Batch: 31932

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	248.4		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-31560/3-A
Matrix: Solid
Analysis Batch: 31932

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	248.0		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 890-2722-A-12-B MS
Matrix: Solid
Analysis Batch: 31932

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	200		250	458.6		mg/Kg		104	90 - 110		

Lab Sample ID: 890-2722-A-12-C MSD
Matrix: Solid
Analysis Batch: 31932

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	200		250	475.0		mg/Kg		110	90 - 110	4	20

QC Association Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2726-1
SDG: 03E1558015

GC VOA

Prep Batch: 31767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2726-1	SW40	Total/NA	Solid	5035	
890-2726-2	FS14	Total/NA	Solid	5035	
890-2726-3	SW41	Total/NA	Solid	5035	
MB 880-31767/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31767/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31767/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2704-A-1-H MS	Matrix Spike	Total/NA	Solid	5035	
890-2704-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2726-1	SW40	Total/NA	Solid	8021B	31767
890-2726-2	FS14	Total/NA	Solid	8021B	31767
890-2726-3	SW41	Total/NA	Solid	8021B	31767
MB 880-31767/5-A	Method Blank	Total/NA	Solid	8021B	31767
MB 880-31850/8	Method Blank	Total/NA	Solid	8021B	
LCS 880-31767/1-A	Lab Control Sample	Total/NA	Solid	8021B	31767
LCSD 880-31767/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31767
890-2704-A-1-H MS	Matrix Spike	Total/NA	Solid	8021B	31767
890-2704-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31767

Analysis Batch: 31999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2726-1	SW40	Total/NA	Solid	Total BTEX	
890-2726-2	FS14	Total/NA	Solid	Total BTEX	
890-2726-3	SW41	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 31577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2726-1	SW40	Total/NA	Solid	8015NM Prep	
890-2726-2	FS14	Total/NA	Solid	8015NM Prep	
890-2726-3	SW41	Total/NA	Solid	8015NM Prep	
MB 880-31577/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31577/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31577/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2723-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2723-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2726-1	SW40	Total/NA	Solid	8015B NM	31577
890-2726-2	FS14	Total/NA	Solid	8015B NM	31577
890-2726-3	SW41	Total/NA	Solid	8015B NM	31577
MB 880-31577/1-A	Method Blank	Total/NA	Solid	8015B NM	31577
LCS 880-31577/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31577
LCSD 880-31577/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31577
890-2723-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	31577
890-2723-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31577

QC Association Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2726-1
SDG: 03E1558015

GC Semi VOA

Analysis Batch: 31763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2726-1	SW40	Total/NA	Solid	8015 NM	
890-2726-2	FS14	Total/NA	Solid	8015 NM	
890-2726-3	SW41	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 31560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2726-1	SW40	Soluble	Solid	DI Leach	
890-2726-2	FS14	Soluble	Solid	DI Leach	
890-2726-3	SW41	Soluble	Solid	DI Leach	
MB 880-31560/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31560/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-31560/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2722-A-12-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2722-A-12-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2726-1	SW40	Soluble	Solid	300.0	31560
890-2726-2	FS14	Soluble	Solid	300.0	31560
890-2726-3	SW41	Soluble	Solid	300.0	31560
MB 880-31560/1-A	Method Blank	Soluble	Solid	300.0	31560
LCS 880-31560/2-A	Lab Control Sample	Soluble	Solid	300.0	31560
LCSD 880-31560/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31560
890-2722-A-12-B MS	Matrix Spike	Soluble	Solid	300.0	31560
890-2722-A-12-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31560

Lab Chronicle

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2726-1
SDG: 03E1558015

Client Sample ID: SW40

Date Collected: 08/03/22 10:55
Date Received: 08/04/22 08:21

Lab Sample ID: 890-2726-1
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	31767	08/08/22 13:00	MR	EET MID
Total/NA	Analysis	8021B		1			31850	08/10/22 17:46	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31999	08/11/22 11:16	SM	EET MID
Total/NA	Analysis	8015 NM		1			31763	08/08/22 12:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	31577	08/05/22 11:58	DM	EET MID
Total/NA	Analysis	8015B NM		1			31631	08/06/22 23:31	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	31560	08/05/22 10:32	CH	EET MID
Soluble	Analysis	300.0		1			31932	08/11/22 18:24	CH	EET MID

Client Sample ID: FS14

Date Collected: 08/03/22 15:50
Date Received: 08/04/22 08:21

Lab Sample ID: 890-2726-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	31767	08/08/22 13:00	MR	EET MID
Total/NA	Analysis	8021B		1			31850	08/10/22 18:13	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31999	08/11/22 11:16	SM	EET MID
Total/NA	Analysis	8015 NM		1			31763	08/08/22 12:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31577	08/05/22 11:58	DM	EET MID
Total/NA	Analysis	8015B NM		1			31631	08/06/22 23:52	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	31560	08/05/22 10:32	CH	EET MID
Soluble	Analysis	300.0		1			31932	08/11/22 18:33	CH	EET MID

Client Sample ID: SW41

Date Collected: 08/03/22 15:40
Date Received: 08/04/22 08:21

Lab Sample ID: 890-2726-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	31767	08/08/22 13:00	MR	EET MID
Total/NA	Analysis	8021B		1			31850	08/10/22 18:39	MR	EET MID
Total/NA	Analysis	Total BTEX		1			31999	08/11/22 11:16	SM	EET MID
Total/NA	Analysis	8015 NM		1			31763	08/08/22 12:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31577	08/05/22 11:58	DM	EET MID
Total/NA	Analysis	8015B NM		1			31631	08/07/22 00:13	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	31560	08/05/22 10:32	CH	EET MID
Soluble	Analysis	300.0		1			31932	08/11/22 18:43	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2726-1
SDG: 03E1558015

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: Goldenchild CTB

Job ID: 890-2726-1
SDG: 03E1558015

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

Protocol References:

ASTM = ASTM International

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:

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

Sample Summary

Client: Ensolum
Project/Site: Goldenchild CTB

Job ID: 890-2726-1
SDG: 03E1558015

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2726-1	SW40	Solid	08/03/22 10:55	08/04/22 08:21	0 - 9
890-2726-2	FS14	Solid	08/03/22 15:50	08/04/22 08:21	9
890-2726-3	SW41	Solid	08/03/22 15:40	08/04/22 08:21	0 - 9

Chain of Custody

eurofins | Environment Testing Xenco

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:	Kalei Jennings	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 East Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	kjennings@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:	Goldenchild CTB	Turn Around	
Project Number:	03E1558015	☑ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Conner Shore	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	IR-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	3.4
Total Containers:		Corrected Temperature:	3.2

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SW40	S	08.03.22	1055	0-9'	C	1		x	x	x
FS14	S	08.03.22	1550	9'	C	1		x	x	x
SW41	S	08.03.22	1540	0-9'	C	1		x	x	x

Parameters

ANALYSIS REQUEST

890-2726 Chain of Custody

Preservative Codes

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

Sample Comments

INCIDENT NUMBER:
NAPP2035526230,
NAPP2102237559,
NAPP2101355437, &
NAPP2101331137

Cost Center: 105575001

AFE:

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		8.4.22 821	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2726-1
SDG Number: 03E1558015

Login Number: 2726
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: 890-2726-1
SDG Number: 03E1558015

Login Number: 2726
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/05/22 10:35 AM

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

ENSOLUM

APPENDIX C

NMOCD Notifications

From: Green, Garrett J
To: ocd.enviro@state.nm.us; Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD
Cc: Tacoma Morrissey; Kalei Jennings; DelawareSpills /SM
Subject: XTO - Sampling Notification (Week of 8/1/22 - 8/5/22)
Date: Friday, July 29, 2022 4:11:00 PM

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of August 1, 2022.

Monday
- PLU C1 Frac Pond / NAPP2207743395
- BEU Connector PW Booster / nAPP2213151424

Tuesday
- BEU Connector PW Booster / nAPP2213151424
- Goldenchild CTB / nAPP2035256230, nAPP2102237559, nAPP2101335437, & nAPP2101331137

Wednesday
- BEU Connector PW Booster / nAPP2213151424
- Ross Draw 25 NW Battery / NAPP2201444794

Thursday
- PLU 89 / NRM1932350962

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 209076

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 209076
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	4/20/2023