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	NAPP2230551957
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.20635 Longitude -103.81299

(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU 18 Twin Wells Ranch East Satellite	Site Type Satellite Battery
Date Release Discovered 10/20/2022	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
G	19	24S	31E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 14.22	Volume Recovered (bbls) 2.00
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☒ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Internal corrosion caused a fitting to separate on the pipe rack, releasing fluids to the pad surface. Vac truck was dispatched and recovered free fluids. A third-party contractor has been retained for remediation purposes.

Form C-141 State of New Mexico
Page 2 Oil Conservation Division

Incident ID	NAPP2230551957
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
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:

NA

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

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

Printed Name: Garrett Green Title: SSHE Coordinator

Signature: [signature] Date: 11/1/2022

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

OCD Only

Received by: Jocelyn Harimon Date: 11/01/2022

Location:	**PLU 18 TWR SAT Battery**	
Spill Date:	**10/20/2022**	
Area 1		
Approximate Area =	27455.00	sq. ft.
Average Saturation (or depth) of spill =	1.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	14.22	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**14.22**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**2.00**	**bbls**

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 155357

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 155357
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	11/1/2022

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State of New Mexico
Oil Conservation Division

Incident ID	NAPP2230551957
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Site Assessment/Characterization

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

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

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

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

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

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

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State of New Mexico
Oil Conservation Division

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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: _ Tommee Lynn Lambert_____ Title: _Environmental Manager_____

Signature: _____ Date: 11/10/23

email: __tommee.l.lambert@exxonmobil.com_____ Telephone: __307-727-6083_____

OCD Only

Received by: Shelly Wells_____ Date: 11/13/2023

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State of New Mexico
Oil Conservation Division

Incident ID	NAPP2230551957
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Tommee Lynn Lambert Title: Environmental Manager

Signature: Date: 11/10/23

email: tommee.l.lambert@exxonmobil.com Telephone: 307-727-6083

OCD Only

Received by: Shelly Wells Date: 11/13/2023

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

Closure Approved by: Scott Rodgers Date: 02/29/2024

Printed Name: Scott Rodgers Title: Environmental Specialist Adv.

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

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JOB DESCRIPTION

PLU 18 TWR SAT. Battery
SDG NUMBER 03E1558144

JOB NUMBER

890-3514-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

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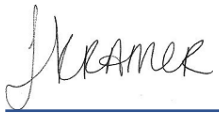
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



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

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Definitions/Glossary

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Job ID: 890-3514-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3514-1

Receipt
The samples were received on 11/18/2022 8:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-3514-1), SS02 (890-3514-2), SS03 (890-3514-3) and SS04 (890-3514-4).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40342 and analytical batch 880-40359 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.

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-40137 and analytical batch 880-40032 was outside the upper control limits.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40009 and analytical batch 880-40345 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: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Client Sample ID: SS01

Lab Sample ID: 890-3514-1
Matrix: Solid
Date Collected: 11/16/22 13:20
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/23/22 15:00	11/26/22 03:01	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/23/22 15:00	11/26/22 03:01	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/23/22 15:00	11/26/22 03:01	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/23/22 15:00	11/26/22 03:01	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/23/22 15:00	11/26/22 03:01	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/23/22 15:00	11/26/22 03:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*11/23/22 15:00*	*11/26/22 03:01*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*11/23/22 15:00*	*11/26/22 03:01*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/28/22 16:31	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**66.7**		50.0		mg/Kg			11/22/22 10:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**66.7**		50.0		mg/Kg		11/21/22 17:39	11/21/22 21:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 21:14	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 21:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*11/21/22 17:39*	*11/21/22 21:14*	*1*
o-Terphenyl	*120*		*70 - 130*	*11/21/22 17:39*	*11/21/22 21:14*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**46500**		249		mg/Kg			11/23/22 20:47	50

Client Sample ID: SS02

Lab Sample ID: 890-3514-2
Matrix: Solid
Date Collected: 11/16/22 13:25
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/23/22 15:00	11/26/22 03:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/23/22 15:00	11/26/22 03:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/23/22 15:00	11/26/22 03:22	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		11/23/22 15:00	11/26/22 03:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/23/22 15:00	11/26/22 03:22	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		11/23/22 15:00	11/26/22 03:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*11/23/22 15:00*	*11/26/22 03:22*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Client Sample ID: SS02

Date Collected: 11/16/22 13:25
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

Lab Sample ID: 890-3514-2
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*11/23/22 15:00*	*11/26/22 03:22*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			11/28/22 16:31	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**139**		50.0	mg/Kg			11/22/22 10:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**78.8**		50.0	mg/Kg		11/21/22 17:39	11/21/22 22:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/21/22 17:39	11/21/22 22:14	1
Oil Range Organics (Over C28-C36)	**60.3**		50.0	mg/Kg		11/21/22 17:39	11/21/22 22:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*100*		*70 - 130*	*11/21/22 17:39*	*11/21/22 22:14*	*1*
o-Terphenyl	*116*		*70 - 130*	*11/21/22 17:39*	*11/21/22 22:14*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**26600**		252	mg/Kg			11/23/22 21:07	50

Client Sample ID: SS03

Date Collected: 11/16/22 13:30
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

Lab Sample ID: 890-3514-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/23/22 15:00	11/26/22 03:42	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/23/22 15:00	11/26/22 03:42	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/23/22 15:00	11/26/22 03:42	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		11/23/22 15:00	11/26/22 03:42	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/23/22 15:00	11/26/22 03:42	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		11/23/22 15:00	11/26/22 03:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*11/23/22 15:00*	*11/26/22 03:42*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*11/23/22 15:00*	*11/26/22 03:42*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			11/28/22 16:31	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Client Sample ID: SS03

Lab Sample ID: 890-3514-3
Matrix: Solid
Date Collected: 11/16/22 13:30
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	65.4		49.8		mg/Kg			11/22/22 10:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	65.4		49.8		mg/Kg		11/21/22 17:39	11/21/22 22:34	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		11/21/22 17:39	11/21/22 22:34	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		11/21/22 17:39	11/21/22 22:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*11/21/22 17:39*	*11/21/22 22:34*	*1*
o-Terphenyl	*125*		*70 - 130*	*11/21/22 17:39*	*11/21/22 22:34*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26900		252		mg/Kg			11/23/22 21:13	50

Client Sample ID: SS04

Lab Sample ID: 890-3514-4
Matrix: Solid
Date Collected: 11/16/22 13:35
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		11/23/22 15:00	11/26/22 04:03	1
Toluene	<0.00202	U	0.00202		mg/Kg		11/23/22 15:00	11/26/22 04:03	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		11/23/22 15:00	11/26/22 04:03	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		11/23/22 15:00	11/26/22 04:03	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		11/23/22 15:00	11/26/22 04:03	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		11/23/22 15:00	11/26/22 04:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*11/23/22 15:00*	*11/26/22 04:03*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*11/23/22 15:00*	*11/26/22 04:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			11/28/22 16:31	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	67.2		50.0		mg/Kg			11/22/22 10:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	67.2		50.0		mg/Kg		11/21/22 17:39	11/21/22 22:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 22:55	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 22:55	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Client Sample ID: SS04
Date Collected: 11/16/22 13:35
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

Lab Sample ID: 890-3514-4
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130	11/21/22 17:39	11/21/22 22:55	1
o-Terphenyl	122		70 - 130	11/21/22 17:39	11/21/22 22:55	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	38000		250	mg/Kg			11/23/22 21:20	50

Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-21869-A-11-A MS	Matrix Spike	100	110
880-21869-A-11-B MSD	Matrix Spike Duplicate	99	112
890-3514-1	SS01	89	112
890-3514-2	SS02	93	105
890-3514-3	SS03	91	105
890-3514-4	SS04	90	107
LCS 880-40342/1-A	Lab Control Sample	99	109
LCSD 880-40342/2-A	Lab Control Sample Dup	102	112
MB 880-40342/5-A	Method Blank	81	105

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-3514-1	SS01	99	120
890-3514-1 MS	SS01	117	119
890-3514-1 MSD	SS01	115	113
890-3514-2	SS02	100	116
890-3514-3	SS03	105	125
890-3514-4	SS04	104	122
LCS 880-40137/2-A	Lab Control Sample	89	101
LCSD 880-40137/3-A	Lab Control Sample Dup	91	101
MB 880-40137/1-A	Method Blank	129	154 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40342/5-A
Matrix: Solid
Analysis Batch: 40359

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40342

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/23/22 15:00	11/25/22 21:07	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/23/22 15:00	11/25/22 21:07	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/23/22 15:00	11/25/22 21:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/23/22 15:00	11/25/22 21:07	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/23/22 15:00	11/25/22 21:07	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/23/22 15:00	11/25/22 21:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*11/23/22 15:00*	*11/25/22 21:07*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*11/23/22 15:00*	*11/25/22 21:07*	*1*

Lab Sample ID: LCS 880-40342/1-A
Matrix: Solid
Analysis Batch: 40359

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40342

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08346		mg/Kg		83	70 - 130		
Toluene			0.100	0.07785		mg/Kg		78	70 - 130		
Ethylbenzene			0.100	0.07618		mg/Kg		76	70 - 130		
m-Xylene & p-Xylene			0.200	0.1590		mg/Kg		80	70 - 130		
o-Xylene			0.100	0.07942		mg/Kg		79	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: LCSD 880-40342/2-A
Matrix: Solid
Analysis Batch: 40359

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40342

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09447		mg/Kg		94	70 - 130	12	35
Toluene			0.100	0.08780		mg/Kg		88	70 - 130	12	35
Ethylbenzene			0.100	0.08423		mg/Kg		84	70 - 130	10	35
m-Xylene & p-Xylene			0.200	0.1744		mg/Kg		87	70 - 130	9	35
o-Xylene			0.100	0.08685		mg/Kg		87	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 880-21869-A-11-A MS
Matrix: Solid
Analysis Batch: 40359

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40342

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U F1 F2	0.101	0.06412	F1	mg/Kg		64	70 - 130		
Toluene	<0.00202	U F1 F2	0.101	0.05662	F1	mg/Kg		56	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

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

Lab Sample ID: 880-21869-A-11-A MS
Matrix: Solid
Analysis Batch: 40359

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40342

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U F1 F2	0.101	0.04955	F1	mg/Kg		49	70 - 130
m-Xylene & p-Xylene	<0.00404	U F1 F2	0.202	0.1000	F1	mg/Kg		50	70 - 130
o-Xylene	<0.00202	U F1 F2	0.101	0.04977	F1	mg/Kg		49	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 880-21869-A-11-B MSD
Matrix: Solid
Analysis Batch: 40359

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40342

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U F1 F2	0.0994	0.01853	F1 F2	mg/Kg		19	70 - 130	110	35
Toluene	<0.00202	U F1 F2	0.0994	0.01354	F1 F2	mg/Kg		14	70 - 130	123	35
Ethylbenzene	<0.00202	U F1 F2	0.0994	0.008815	F1 F2	mg/Kg		9	70 - 130	140	35
m-Xylene & p-Xylene	<0.00404	U F1 F2	0.199	0.01508	F1 F2	mg/Kg		8	70 - 130	148	35
o-Xylene	<0.00202	U F1 F2	0.0994	0.008268	F1 F2	mg/Kg		8	70 - 130	143	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

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

Lab Sample ID: MB 880-40137/1-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40137

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		11/21/22 17:39	11/21/22 20:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*
o-Terphenyl	*154*	*S1+*	*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*

Lab Sample ID: LCS 880-40137/2-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1114		mg/Kg		111	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1081		mg/Kg		108	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

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

Lab Sample ID: LCS 880-40137/2-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: LCSD 880-40137/3-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1121		mg/Kg		112	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1074		mg/Kg		107	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: 890-3514-1 MS
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 40137

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	66.7		998	1181		mg/Kg		112	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1041		mg/Kg		104	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	117		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: 890-3514-1 MSD
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 40137

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	66.7		997	1183		mg/Kg		112	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	1016		mg/Kg		102	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	113		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40009/1-A
Matrix: Solid
Analysis Batch: 40345

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			11/23/22 18:29	1

Lab Sample ID: LCS 880-40009/2-A
Matrix: Solid
Analysis Batch: 40345

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	262.5		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-40009/3-A
Matrix: Solid
Analysis Batch: 40345

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	260.9		mg/Kg		104	90 - 110	1	20

Lab Sample ID: 890-3513-A-1-B MS
Matrix: Solid
Analysis Batch: 40345

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	1160		250	1349	4	mg/Kg		76	90 - 110		

Lab Sample ID: 890-3513-A-1-C MSD
Matrix: Solid
Analysis Batch: 40345

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	1160		250	1331	4	mg/Kg		69	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

GC VOA

Prep Batch: 40342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3514-1	SS01	Total/NA	Solid	5035	
890-3514-2	SS02	Total/NA	Solid	5035	
890-3514-3	SS03	Total/NA	Solid	5035	
890-3514-4	SS04	Total/NA	Solid	5035	
MB 880-40342/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40342/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40342/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-21869-A-11-A MS	Matrix Spike	Total/NA	Solid	5035	
880-21869-A-11-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3514-1	SS01	Total/NA	Solid	8021B	40342
890-3514-2	SS02	Total/NA	Solid	8021B	40342
890-3514-3	SS03	Total/NA	Solid	8021B	40342
890-3514-4	SS04	Total/NA	Solid	8021B	40342
MB 880-40342/5-A	Method Blank	Total/NA	Solid	8021B	40342
LCS 880-40342/1-A	Lab Control Sample	Total/NA	Solid	8021B	40342
LCSD 880-40342/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40342
880-21869-A-11-A MS	Matrix Spike	Total/NA	Solid	8021B	40342
880-21869-A-11-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40342

Analysis Batch: 40512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3514-1	SS01	Total/NA	Solid	Total BTEX	
890-3514-2	SS02	Total/NA	Solid	Total BTEX	
890-3514-3	SS03	Total/NA	Solid	Total BTEX	
890-3514-4	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 40032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3514-1	SS01	Total/NA	Solid	8015B NM	40137
890-3514-2	SS02	Total/NA	Solid	8015B NM	40137
890-3514-3	SS03	Total/NA	Solid	8015B NM	40137
890-3514-4	SS04	Total/NA	Solid	8015B NM	40137
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015B NM	40137
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40137
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40137
890-3514-1 MS	SS01	Total/NA	Solid	8015B NM	40137
890-3514-1 MSD	SS01	Total/NA	Solid	8015B NM	40137

Prep Batch: 40137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3514-1	SS01	Total/NA	Solid	8015NM Prep	
890-3514-2	SS02	Total/NA	Solid	8015NM Prep	
890-3514-3	SS03	Total/NA	Solid	8015NM Prep	
890-3514-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

GC Semi VOA (Continued)

Prep Batch: 40137 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3514-1 MS	SS01	Total/NA	Solid	8015NM Prep	
890-3514-1 MSD	SS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3514-1	SS01	Total/NA	Solid	8015 NM	
890-3514-2	SS02	Total/NA	Solid	8015 NM	
890-3514-3	SS03	Total/NA	Solid	8015 NM	
890-3514-4	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 40009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3514-1	SS01	Soluble	Solid	DI Leach	
890-3514-2	SS02	Soluble	Solid	DI Leach	
890-3514-3	SS03	Soluble	Solid	DI Leach	
890-3514-4	SS04	Soluble	Solid	DI Leach	
MB 880-40009/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40009/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40009/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3513-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3513-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 40345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3514-1	SS01	Soluble	Solid	300.0	40009
890-3514-2	SS02	Soluble	Solid	300.0	40009
890-3514-3	SS03	Soluble	Solid	300.0	40009
890-3514-4	SS04	Soluble	Solid	300.0	40009
MB 880-40009/1-A	Method Blank	Soluble	Solid	300.0	40009
LCS 880-40009/2-A	Lab Control Sample	Soluble	Solid	300.0	40009
LCSD 880-40009/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40009
890-3513-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	40009
890-3513-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	40009

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Client Sample ID: SS01

Lab Sample ID: 890-3514-1
Matrix: Solid
Date Collected: 11/16/22 13:20
Date Received: 11/18/22 08:20

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	40342	11/23/22 15:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40359	11/26/22 03:01	EL	EET MID
Total/NA	Analysis	Total BTEX		1			40512	11/28/22 16:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			40187	11/22/22 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	40137	11/21/22 17:39	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40032	11/21/22 21:14	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	40009	11/20/22 12:19	CH	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	40345	11/23/22 20:47	CH	EET MID

Client Sample ID: SS02

Lab Sample ID: 890-3514-2
Matrix: Solid
Date Collected: 11/16/22 13:25
Date Received: 11/18/22 08:20

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	40342	11/23/22 15:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40359	11/26/22 03:22	EL	EET MID
Total/NA	Analysis	Total BTEX		1			40512	11/28/22 16:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			40187	11/22/22 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	40137	11/21/22 17:39	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40032	11/21/22 22:14	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	40009	11/20/22 12:19	CH	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	40345	11/23/22 21:07	CH	EET MID

Client Sample ID: SS03

Lab Sample ID: 890-3514-3
Matrix: Solid
Date Collected: 11/16/22 13:30
Date Received: 11/18/22 08:20

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	40342	11/23/22 15:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40359	11/26/22 03:42	EL	EET MID
Total/NA	Analysis	Total BTEX		1			40512	11/28/22 16:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			40187	11/22/22 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	40137	11/21/22 17:39	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40032	11/21/22 22:34	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	40009	11/20/22 12:19	CH	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	40345	11/23/22 21:13	CH	EET MID

Client Sample ID: SS04

Lab Sample ID: 890-3514-4
Matrix: Solid
Date Collected: 11/16/22 13:35
Date Received: 11/18/22 08:20

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	40342	11/23/22 15:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40359	11/26/22 04:03	EL	EET MID
Total/NA	Analysis	Total BTEX		1			40512	11/28/22 16:31	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Client Sample ID: SS04

Date Collected: 11/16/22 13:35
Date Received: 11/18/22 08:20

Lab Sample ID: 890-3514-4

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			40187	11/22/22 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	40137	11/21/22 17:39	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40032	11/21/22 22:55	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	40009	11/20/22 12:19	CH	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	40345	11/23/22 21:20	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: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

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: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3514-1	SS01	Solid	11/16/22 13:20	11/18/22 08:20	0.5'
890-3514-2	SS02	Solid	11/16/22 13:25	11/18/22 08:20	0.5'
890-3514-3	SS03	Solid	11/16/22 13:30	11/18/22 08:20	0.5'
890-3514-4	SS04	Solid	11/16/22 13:35	11/18/22 08:20	0.5'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	PLU 18 TWR Sat. Battery	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558144	Pres. Code	
Project Location:	32.20635, -103.81299	Due Date:	
Sampler's Name:	MeredithRoberts	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TWM007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.4
Total Containers:		Corrected Temperature:	4.2

ANALYSIS REQUEST

Parameters: Chlorides, BTEX, TPH

890-3514 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 Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Chlorides	BTEX	TPH	Sample Comments
SS01	S	11/16/22	1320	0.5'	G	1	X	X	X	Incident#: nAPP2230551957
SS02	↓	↓	1325	↓	↓	↓	↓	↓	↓	
SS03			1330							
SS04			1335							Cost Center: 2111031001

→ ME

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	Meaze		11.18.22820			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 11/10/2023 1:29:49 PM
Released to Imaging: 2/29/2024 4:12:50 PM
11/28/2022
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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3514-1
SDG Number: 03E1558144

Login Number: 3514
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3514-1
SDG Number: 03E1558144

Login Number: 3514
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 11/21/22 08:46 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Generated 11/29/2022 8:52:46 AM

JOB DESCRIPTION

PLU 18 TWR Sat Battery
SDG NUMBER 03E1558144

JOB NUMBER

890-3515-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 2/29/2024 4:12:50 PM

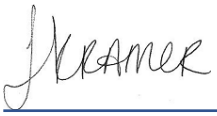
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



Generated
11/29/2022 8:52:46 AM

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

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Laboratory Job ID: 890-3515-1
SDG: 03E1558144

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Definitions/Glossary

Client: Ensolum Job ID: 890-3515-1
Project/Site: PLU 18 TWR Sat Battery SDG: 03E1558144

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

Job ID: 890-3515-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3515-1

Receipt
The sample was received on 11/18/2022 8:20 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 4.2°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SS05 (890-3515-1).

GC VOA
Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-40412 and analytical batch 880-40361 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-40137 and analytical batch 880-40032 was outside the upper control limits.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40009 and analytical batch 880-40345 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: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

Client Sample ID: SS05

Date Collected: 11/16/22 13:00
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

Lab Sample ID: 890-3515-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/28/22 10:23	11/28/22 18:53	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/28/22 10:23	11/28/22 18:53	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/28/22 10:23	11/28/22 18:53	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/28/22 10:23	11/28/22 18:53	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/28/22 10:23	11/28/22 18:53	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/28/22 10:23	11/28/22 18:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*11/28/22 10:23*	*11/28/22 18:53*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*11/28/22 10:23*	*11/28/22 18:53*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/29/22 09:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/22/22 10:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/21/22 17:39	11/21/22 23:15	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/21/22 17:39	11/21/22 23:15	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/21/22 17:39	11/21/22 23:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*11/21/22 17:39*	*11/21/22 23:15*	*1*
o-Terphenyl	*105*		*70 - 130*	*11/21/22 17:39*	*11/21/22 23:15*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**18.1**		4.98		mg/Kg			11/23/22 21:27	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

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)
880-21724-A-1-B MS	Matrix Spike	86	105
880-21724-A-1-C MSD	Matrix Spike Duplicate	87	110
890-3515-1	SS05	104	114
LCS 880-40412/1-A	Lab Control Sample	86	107
LCSD 880-40412/2-A	Lab Control Sample Dup	88	101
MB 880-40412/5-A	Method Blank	74	110

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)
890-3514-A-1-C MS	Matrix Spike	117	119
890-3514-A-1-D MSD	Matrix Spike Duplicate	115	113
890-3515-1	SS05	93	105
LCS 880-40137/2-A	Lab Control Sample	89	101
LCSD 880-40137/3-A	Lab Control Sample Dup	91	101
MB 880-40137/1-A	Method Blank	129	154 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40412/5-A
Matrix: Solid
Analysis Batch: 40361

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40412

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/28/22 10:23	11/28/22 12:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/28/22 10:23	11/28/22 12:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/28/22 10:23	11/28/22 12:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/28/22 10:23	11/28/22 12:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/28/22 10:23	11/28/22 12:29	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/28/22 10:23	11/28/22 12:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*11/28/22 10:23*	*11/28/22 12:29*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*11/28/22 10:23*	*11/28/22 12:29*	*1*

Lab Sample ID: LCS 880-40412/1-A
Matrix: Solid
Analysis Batch: 40361

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40412

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09831		mg/Kg		98	70 - 130		
Toluene			0.100	0.1061		mg/Kg		106	70 - 130		
Ethylbenzene			0.100	0.09887		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.1767		mg/Kg		88	70 - 130		
o-Xylene			0.100	0.08535		mg/Kg		85	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-40412/2-A
Matrix: Solid
Analysis Batch: 40361

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40412

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1104		mg/Kg		110	70 - 130	12	35
Toluene			0.100	0.1243		mg/Kg		124	70 - 130	16	35
Ethylbenzene			0.100	0.1190		mg/Kg		119	70 - 130	18	35
m-Xylene & p-Xylene			0.200	0.2122		mg/Kg		106	70 - 130	18	35
o-Xylene			0.100	0.1020		mg/Kg		102	70 - 130	18	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 880-21724-A-1-B MS
Matrix: Solid
Analysis Batch: 40361

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40412

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.100	0.09140		mg/Kg		91	70 - 130		
Toluene	<0.00201	U	0.100	0.09742		mg/Kg		97	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

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

Lab Sample ID: 880-21724-A-1-B MS
Matrix: Solid
Analysis Batch: 40361

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40412

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.100	0.09031		mg/Kg		90	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.201	0.1585		mg/Kg		79	70 - 130
o-Xylene	<0.00201	U F1	0.100	0.07634		mg/Kg		76	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 880-21724-A-1-C MSD
Matrix: Solid
Analysis Batch: 40361

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40412

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0996	0.08592		mg/Kg		86	70 - 130	6	35
Toluene	<0.00201	U	0.0996	0.08873		mg/Kg		89	70 - 130	9	35
Ethylbenzene	<0.00201	U	0.0996	0.07959		mg/Kg		80	70 - 130	13	35
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1406		mg/Kg		71	70 - 130	12	35
o-Xylene	<0.00201	U F1	0.0996	0.06861	F1	mg/Kg		68	70 - 130	11	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

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

Lab Sample ID: MB 880-40137/1-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40137

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		11/21/22 17:39	11/21/22 20:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*
o-Terphenyl	*154*	*S1+*	*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*

Lab Sample ID: LCS 880-40137/2-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1114		mg/Kg		111	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1081		mg/Kg		108	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

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

Lab Sample ID: LCS 880-40137/2-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: LCSD 880-40137/3-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1121		mg/Kg		112	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1074		mg/Kg		107	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: 890-3514-A-1-C MS
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40137

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	66.7		998	1181		mg/Kg		112	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1041		mg/Kg		104	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	117		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: 890-3514-A-1-D MSD
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40137

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	66.7		997	1183		mg/Kg		112	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	1016		mg/Kg		102	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	113		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40009/1-A
Matrix: Solid
Analysis Batch: 40345

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			11/23/22 18:29	1

Lab Sample ID: LCS 880-40009/2-A
Matrix: Solid
Analysis Batch: 40345

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	262.5		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-40009/3-A
Matrix: Solid
Analysis Batch: 40345

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	260.9		mg/Kg		104	90 - 110	1	20

Lab Sample ID: 890-3513-A-1-B MS
Matrix: Solid
Analysis Batch: 40345

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	1160		250	1349	4	mg/Kg		76	90 - 110		

Lab Sample ID: 890-3513-A-1-C MSD
Matrix: Solid
Analysis Batch: 40345

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	1160		250	1331	4	mg/Kg		69	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

GC VOA

Analysis Batch: 40361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3515-1	SS05	Total/NA	Solid	8021B	40412
MB 880-40412/5-A	Method Blank	Total/NA	Solid	8021B	40412
LCS 880-40412/1-A	Lab Control Sample	Total/NA	Solid	8021B	40412
LCSD 880-40412/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40412
880-21724-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	40412
880-21724-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40412

Prep Batch: 40412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3515-1	SS05	Total/NA	Solid	5035	
MB 880-40412/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40412/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40412/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-21724-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-21724-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3515-1	SS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 40032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3515-1	SS05	Total/NA	Solid	8015B NM	40137
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015B NM	40137
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40137
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40137
890-3514-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	40137
890-3514-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	40137

Prep Batch: 40137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3515-1	SS05	Total/NA	Solid	8015NM Prep	
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3514-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3514-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3515-1	SS05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 40009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3515-1	SS05	Soluble	Solid	DI Leach	
MB 880-40009/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40009/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40009/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

HPLC/IC (Continued)

Leach Batch: 40009 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3513-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3513-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 40345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3515-1	SS05	Soluble	Solid	300.0	40009
MB 880-40009/1-A	Method Blank	Soluble	Solid	300.0	40009
LCS 880-40009/2-A	Lab Control Sample	Soluble	Solid	300.0	40009
LCSD 880-40009/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40009
890-3513-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	40009
890-3513-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	40009

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

Client Sample ID: SS05

Date Collected: 11/16/22 13:00
Date Received: 11/18/22 08:20

Lab Sample ID: 890-3515-1

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	40412	11/28/22 10:23	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40361	11/28/22 18:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40565	11/29/22 09:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			40188	11/22/22 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	40137	11/21/22 17:39	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40032	11/21/22 23:15	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	40009	11/20/22 12:19	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40345	11/23/22 21:27	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: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

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: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3515-1	SS05	Solid	11/16/22 13:00	11/18/22 08:20	0.5'

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11/29/2022

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Chain of Custody

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

Work Order No: _____

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

Work Order Comments

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

Project Name:	PLU 18 TWR Sat. Battery	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558144	Due Date:	
Project Location:	32.20635, -103.81299	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Meredith Roberts		
PO #:			

SAMPLE RECEIPT		
Temp Blank:	(Yes) No	Wet Ice: (Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID: Thmo 07
Cooler Custody Seals:	Yes No (N/A)	Correction Factor: -0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading: 4.4
Total Containers:		Corrected Temperature: 4.2

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Chlorides	BTEX	TPH
SS05	S	11/16/22	1300	0.5'	G	1		X	X	X

MR

890-3515 Chain of Custody

Preservative Codes

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

Sample Comments

Incident #: nAPP2230551957

Cost Center: 2111031001

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			11.18.22 820			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 11/10/2023 1:29:49 PM

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3515-1
SDG Number: 03E1558144

Login Number: 3515
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3515-1
SDG Number: 03E1558144

Login Number: 3515
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 11/21/22 08:46 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Generated 11/30/2022 9:49:44 AM

JOB DESCRIPTION

PLU 18 TWR Sat Battery
SDG NUMBER 03E1558144

JOB NUMBER

890-3517-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 2/29/2024 4:12:30 PM

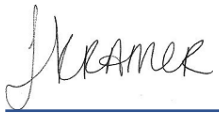
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



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11/30/2022 9:49:44 AM

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

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Laboratory Job ID: 890-3517-1
SDG: 03E1558144

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Definitions/Glossary

Client: Ensolum Job ID: 890-3517-1
Project/Site: PLU 18 TWR Sat Battery SDG: 03E1558144

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

Job ID: 890-3517-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3517-1

Receipt
The sample was received on 11/18/2022 8:20 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 4.2°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SS06 (890-3517-1).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-3493-A-1-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40432 and analytical batch 880-40541 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.

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-40137 and analytical batch 880-40032 was outside the upper control limits.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40009 and analytical batch 880-40345 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: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

Client Sample ID: SS06

Date Collected: 11/16/22 13:05
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

Lab Sample ID: 890-3517-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/28/22 10:35	11/30/22 01:42	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/28/22 10:35	11/30/22 01:42	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/28/22 10:35	11/30/22 01:42	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/28/22 10:35	11/30/22 01:42	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/28/22 10:35	11/30/22 01:42	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/28/22 10:35	11/30/22 01:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*11/28/22 10:35*	*11/30/22 01:42*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*11/28/22 10:35*	*11/30/22 01:42*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/30/22 09:51	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/22/22 10:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 23:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 23:55	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 23:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*11/21/22 17:39*	*11/21/22 23:55*	*1*
o-Terphenyl	*111*		*70 - 130*	*11/21/22 17:39*	*11/21/22 23:55*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**35.2**		4.96		mg/Kg			11/23/22 21:40	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-3493-A-1-D MS	Matrix Spike	72	104
890-3493-A-1-E MSD	Matrix Spike Duplicate	69 S1-	102
890-3517-1	SS06	78	106
LCS 880-40432/1-A	Lab Control Sample	91	109
LCSD 880-40432/2-A	Lab Control Sample Dup	87	109
MB 880-40432/5-A	Method Blank	73	110
MB 880-40470/5-A	Method Blank	72	109

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-3514-A-1-C MS	Matrix Spike	117	119
890-3514-A-1-D MSD	Matrix Spike Duplicate	115	113
890-3517-1	SS06	99	111
LCS 880-40137/2-A	Lab Control Sample	89	101
LCSD 880-40137/3-A	Lab Control Sample Dup	91	101
MB 880-40137/1-A	Method Blank	129	154 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40432/5-A
Matrix: Solid
Analysis Batch: 40541

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40432

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/28/22 10:35	11/29/22 23:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/28/22 10:35	11/29/22 23:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/28/22 10:35	11/29/22 23:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/28/22 10:35	11/29/22 23:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/28/22 10:35	11/29/22 23:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/28/22 10:35	11/29/22 23:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*73*		*70 - 130*	*11/28/22 10:35*	*11/29/22 23:50*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*11/28/22 10:35*	*11/29/22 23:50*	*1*

Lab Sample ID: LCS 880-40432/1-A
Matrix: Solid
Analysis Batch: 40541

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40432

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09748		mg/Kg		97	70 - 130		
Toluene			0.100	0.1040		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.09734		mg/Kg		97	70 - 130		
m-Xylene & p-Xylene			0.200	0.1695		mg/Kg		85	70 - 130		
o-Xylene			0.100	0.08489		mg/Kg		85	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: LCSD 880-40432/2-A
Matrix: Solid
Analysis Batch: 40541

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40432

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1091		mg/Kg		109	70 - 130	11	35
Toluene			0.100	0.1113		mg/Kg		111	70 - 130	7	35
Ethylbenzene			0.100	0.1029		mg/Kg		103	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1785		mg/Kg		89	70 - 130	5	35
o-Xylene			0.100	0.08844		mg/Kg		88	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 890-3493-A-1-D MS
Matrix: Solid
Analysis Batch: 40541

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40432

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U F1 F2	0.0996	0.02627	F1	mg/Kg		26	70 - 130		
Toluene	<0.00201	U F1 F2	0.0996	0.02749	F1	mg/Kg		28	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

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

Lab Sample ID: 890-3493-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40541 — **Prep Batch: 40432**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U F1 F2	0.0996	0.03012	F1	mg/Kg		30	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.199	0.05464	F1	mg/Kg		27	70 - 130
o-Xylene	<0.00201	U F1	0.0996	0.03019	F1	mg/Kg		30	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 890-3493-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40541 — **Prep Batch: 40432**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1 F2	0.100	0.04789	F1 F2	mg/Kg		48	70 - 130	58	35
Toluene	<0.00201	U F1 F2	0.100	0.04517	F1 F2	mg/Kg		45	70 - 130	49	35
Ethylbenzene	<0.00201	U F1 F2	0.100	0.04427	F1 F2	mg/Kg		44	70 - 130	38	35
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.200	0.08197	F1 F2	mg/Kg		41	70 - 130	40	35
o-Xylene	<0.00201	U F1	0.100	0.04193	F1	mg/Kg		41	70 - 130	33	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*69*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: MB 880-40470/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40541 — **Prep Batch: 40470**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/28/22 14:18	11/29/22 12:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/28/22 14:18	11/29/22 12:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/28/22 14:18	11/29/22 12:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/28/22 14:18	11/29/22 12:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/28/22 14:18	11/29/22 12:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/28/22 14:18	11/29/22 12:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*	*11/28/22 14:18*	*11/29/22 12:12*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*11/28/22 14:18*	*11/29/22 12:12*	*1*

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

Lab Sample ID: MB 880-40137/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40032 — **Prep Batch: 40137**

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		11/21/22 17:39	11/21/22 20:13	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

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

Lab Sample ID: MB 880-40137/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40032 — **Prep Batch: 40137**

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		11/21/22 17:39	11/21/22 20:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*
o-Terphenyl	*154*	*S1+*	*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*

Lab Sample ID: LCS 880-40137/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40032 — **Prep Batch: 40137**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1114		mg/Kg		111	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1081		mg/Kg		108	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*101*		*70 - 130*

Lab Sample ID: LCSD 880-40137/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40032 — **Prep Batch: 40137**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1121		mg/Kg		112	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1074		mg/Kg		107	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*91*		*70 - 130*
o-Terphenyl	*101*		*70 - 130*

Lab Sample ID: 890-3514-A-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40032 — **Prep Batch: 40137**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	66.7		998	1181		mg/Kg		112	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1041		mg/Kg		104	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*117*		*70 - 130*
o-Terphenyl	*119*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

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

Lab Sample ID: 890-3514-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40032 — **Prep Batch: 40137**

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	66.7		997	1183		mg/Kg		112	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	1016		mg/Kg		102	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*115*		*70 - 130*
o-Terphenyl	*113*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40009/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 40345

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/23/22 18:29	1

Lab Sample ID: LCS 880-40009/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 40345

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	262.5		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-40009/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 40345

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	260.9		mg/Kg		104	90 - 110	1	20

Lab Sample ID: 890-3513-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 40345

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	1160		250	1349	4	mg/Kg		76	90 - 110		

Lab Sample ID: 890-3513-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 40345

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1160		250	1331	4	mg/Kg		69	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

GC VOA

Prep Batch: 40432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3517-1	SS06	Total/NA	Solid	5035	
MB 880-40432/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40432/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40432/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3493-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-3493-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 40470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-40470/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 40541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3517-1	SS06	Total/NA	Solid	8021B	40432
MB 880-40432/5-A	Method Blank	Total/NA	Solid	8021B	40432
MB 880-40470/5-A	Method Blank	Total/NA	Solid	8021B	40470
LCS 880-40432/1-A	Lab Control Sample	Total/NA	Solid	8021B	40432
LCSD 880-40432/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40432
890-3493-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	40432
890-3493-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40432

Analysis Batch: 40672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3517-1	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 40032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3517-1	SS06	Total/NA	Solid	8015B NM	40137
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015B NM	40137
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40137
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40137
890-3514-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	40137
890-3514-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	40137

Prep Batch: 40137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3517-1	SS06	Total/NA	Solid	8015NM Prep	
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3514-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3514-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3517-1	SS06	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

HPLC/IC

Leach Batch: 40009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3517-1	SS06	Soluble	Solid	DI Leach	
MB 880-40009/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40009/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40009/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3513-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3513-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 40345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3517-1	SS06	Soluble	Solid	300.0	40009
MB 880-40009/1-A	Method Blank	Soluble	Solid	300.0	40009
LCS 880-40009/2-A	Lab Control Sample	Soluble	Solid	300.0	40009
LCSD 880-40009/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40009
890-3513-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	40009
890-3513-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	40009

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

Client Sample ID: SS06

Date Collected: 11/16/22 13:05
Date Received: 11/18/22 08:20

Lab Sample ID: 890-3517-1

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	40432	11/28/22 10:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40541	11/30/22 01:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40672	11/30/22 09:51	SM	EET MID
Total/NA	Analysis	8015 NM		1			40190	11/22/22 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	40137	11/21/22 17:39	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40032	11/21/22 23:55	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	40009	11/20/22 12:19	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40345	11/23/22 21:40	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

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: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3517-1	SS06	Solid	11/16/22 13:05	11/18/22 08:20	0.5'

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11/30/2022

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337-257-8307	Email:	tmorrissey@ensolum.com

Work Order Comments

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

Project Name:	PLU 18 TwR Sat. Battery	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558144	Due Date:	
Project Location:	32.20635, -103.81299	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Meredith Roberts		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	NM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.4
Total Containers:		Corrected Temperature:	4.2

ANALYSIS REQUEST

Preservative Codes

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

890-3517 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chlorides	BTEX	TPH	Sample Comments
SS06	S	11/16/22	1305	0.5'	G	1		X	X	X	Incident #: nAPP2230551957
											Cost Center: 211031001

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		11-15-22 820	4		
3			6		
5					

Revised Date: 08/25/2020 Rev: 2020.2

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Received by OCD: 11/10/2023 1:29:49 PM

Released to Imaging: 2/29/2024 4:12:50 PM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3517-1
SDG Number: 03E1558144

Login Number: 3517
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3517-1
SDG Number: 03E1558144

Login Number: 3517
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 11/21/22 08:46 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Generated 11/29/2022 8:53:52 AM

JOB DESCRIPTION

PLU 18 TWR Sat Battery
SDG NUMBER 03E1558144

JOB NUMBER

890-3519-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 2/29/2024 4:12:30 PM

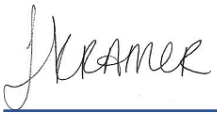
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



Generated
11/29/2022 8:53:52 AM

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

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Laboratory Job ID: 890-3519-1
SDG: 03E1558144

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Definitions/Glossary

Client: Ensolum Job ID: 890-3519-1
Project/Site: PLU 18 TWR Sat Battery SDG: 03E1558144

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

Job ID: 890-3519-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3519-1

Receipt
The sample was received on 11/18/2022 8:20 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 4.2°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SS07 (890-3519-1).

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: The surrogate recovery for the blank associated with preparation batch 880-40137 and analytical batch 880-40032 was outside the upper control limits.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

Client Sample ID: SS07

Date Collected: 11/16/22 13:10
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

Lab Sample ID: 890-3519-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 19:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 19:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 19:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/28/22 09:59	11/28/22 19:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 19:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/28/22 09:59	11/28/22 19:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*11/28/22 09:59*	*11/28/22 19:25*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*11/28/22 09:59*	*11/28/22 19:25*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			11/29/22 09:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/22/22 10:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/22/22 00:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/22/22 00:35	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/22/22 00:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*11/21/22 17:39*	*11/22/22 00:35*	*1*
o-Terphenyl	*106*		*70 - 130*	*11/21/22 17:39*	*11/22/22 00:35*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**57.9**		4.98		mg/Kg			11/23/22 19:35	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

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)
890-3503-A-1-C MS	Matrix Spike	105	110
890-3503-A-1-D MSD	Matrix Spike Duplicate	100	110
890-3519-1	SS07	104	102
LCS 880-40407/1-A	Lab Control Sample	107	105
LCSD 880-40407/2-A	Lab Control Sample Dup	103	114
MB 880-40407/5-A	Method Blank	80	103

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3514-A-1-C MS	Matrix Spike	117	119
890-3514-A-1-D MSD	Matrix Spike Duplicate	115	113
890-3519-1	SS07	96	106
LCS 880-40137/2-A	Lab Control Sample	89	101
LCSD 880-40137/3-A	Lab Control Sample Dup	91	101
MB 880-40137/1-A	Method Blank	129	154 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40407/5-A
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40407

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/28/22 09:59	11/28/22 12:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*11/28/22 09:59*	*11/28/22 12:11*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*11/28/22 09:59*	*11/28/22 12:11*	*1*

Lab Sample ID: LCS 880-40407/1-A
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40407

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	0.1006		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.1080		mg/Kg		108	70 - 130		
m-Xylene & p-Xylene			0.200	0.2161		mg/Kg		108	70 - 130		
o-Xylene			0.100	0.1070		mg/Kg		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 880-40407/2-A
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40407

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1068		mg/Kg		107	70 - 130	13	35
Toluene			0.100	0.1006		mg/Kg		101	70 - 130	0	35
Ethylbenzene			0.100	0.1024		mg/Kg		102	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.2084		mg/Kg		104	70 - 130	4	35
o-Xylene			0.100	0.1031		mg/Kg		103	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: 890-3503-A-1-C MS
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40407

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.100	0.09904		mg/Kg		99	70 - 130		
Toluene	<0.00201	U	0.100	0.08596		mg/Kg		86	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

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

Lab Sample ID: 890-3503-A-1-C MS
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40407

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.100	0.08173		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.201	0.1679		mg/Kg		84	70 - 130
o-Xylene	<0.00201	U	0.100	0.08293		mg/Kg		83	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 890-3503-A-1-D MSD
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40407

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0990	0.1026		mg/Kg		104	70 - 130	3	35
Toluene	<0.00201	U	0.0990	0.09200		mg/Kg		93	70 - 130	7	35
Ethylbenzene	<0.00201	U	0.0990	0.08517		mg/Kg		86	70 - 130	4	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1742		mg/Kg		88	70 - 130	4	35
o-Xylene	<0.00201	U	0.0990	0.08588		mg/Kg		87	70 - 130	3	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

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

Lab Sample ID: MB 880-40137/1-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40137

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		11/21/22 17:39	11/21/22 20:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*
o-Terphenyl	*154*	*S1+*	*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*

Lab Sample ID: LCS 880-40137/2-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1114		mg/Kg		111	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1081		mg/Kg		108	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

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

Lab Sample ID: LCS 880-40137/2-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: LCSD 880-40137/3-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1121		mg/Kg		112	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1074		mg/Kg		107	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: 890-3514-A-1-C MS
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40137

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	66.7		998	1181		mg/Kg		112	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1041		mg/Kg		104	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	117		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: 890-3514-A-1-D MSD
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40137

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	66.7		997	1183		mg/Kg		112	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	1016		mg/Kg		102	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	113		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40010/1-A
Matrix: Solid
Analysis Batch: 40325

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			11/23/22 19:11	1

Lab Sample ID: LCS 880-40010/2-A
Matrix: Solid
Analysis Batch: 40325

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	243.9		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-40010/3-A
Matrix: Solid
Analysis Batch: 40325

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	246.3		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-3519-1 MS
Matrix: Solid
Analysis Batch: 40325

Client Sample ID: SS07
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	57.9		249	281.5		mg/Kg		90	90 - 110		

Lab Sample ID: 890-3519-1 MSD
Matrix: Solid
Analysis Batch: 40325

Client Sample ID: SS07
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	57.9		249	287.5		mg/Kg		92	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

GC VOA

Analysis Batch: 40362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1	SS07	Total/NA	Solid	8021B	40407
MB 880-40407/5-A	Method Blank	Total/NA	Solid	8021B	40407
LCS 880-40407/1-A	Lab Control Sample	Total/NA	Solid	8021B	40407
LCSD 880-40407/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40407
890-3503-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	40407
890-3503-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40407

Prep Batch: 40407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1	SS07	Total/NA	Solid	5035	
MB 880-40407/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40407/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40407/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3503-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-3503-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 40032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1	SS07	Total/NA	Solid	8015B NM	40137
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015B NM	40137
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40137
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40137
890-3514-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	40137
890-3514-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	40137

Prep Batch: 40137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1	SS07	Total/NA	Solid	8015NM Prep	
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3514-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3514-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1	SS07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 40010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1	SS07	Soluble	Solid	DI Leach	
MB 880-40010/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

HPLC/IC (Continued)

Leach Batch: 40010 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1 MS	SS07	Soluble	Solid	DI Leach	
890-3519-1 MSD	SS07	Soluble	Solid	DI Leach	

Analysis Batch: 40325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1	SS07	Soluble	Solid	300.0	40010
MB 880-40010/1-A	Method Blank	Soluble	Solid	300.0	40010
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	300.0	40010
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40010
890-3519-1 MS	SS07	Soluble	Solid	300.0	40010
890-3519-1 MSD	SS07	Soluble	Solid	300.0	40010

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

Client Sample ID: SS07
Date Collected: 11/16/22 13:10
Date Received: 11/18/22 08:20

Lab Sample ID: 890-3519-1
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			5.00 g	5 mL	40407	11/28/22 09:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40362	11/28/22 19:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40557	11/29/22 09:20	SM	EET MID
Total/NA	Analysis	8015 NM		1			40192	11/22/22 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	40137	11/21/22 17:39	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40032	11/22/22 00:35	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	40010	11/20/22 12:21	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40325	11/23/22 19:35	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: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

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: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3519-1	SS07	Solid	11/16/22 13:10	11/18/22 08:20	0.5'

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11/29/2022

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337-257-8307	Email:	tmorrissey@ensolum.com

Work Order Comments

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

Project Name:	PLU 18 TWR Sat. Battery	Turn Around	
Project Number:	03E1558144	☑ Routine ☐ Rush	
Project Location:	32.20635, -103.81299	Due Date:	
Sampler's Name:	Meredith Roberts	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	Thm007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.4	
Total Containers:		Corrected Temperature:	4.2	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Chlorides	BTEX	TPH
SS07	S	11/16/22	1310	0.5'	G	1		X	X	X

890-3519 Chain of Custody

Preservative Codes

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

Sample Comments

Incident #:
nAPP2230551957

Cost Center:
2111031001

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	[signature]	[signature]	11-18-22 820			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Page 18 of 20

Received by OCD: 11/10/2023 1:29:49 PM

Released to Imaging: 2/29/2024 4:12:50 PM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3519-1
SDG Number: 03E1558144

Login Number: 3519
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3519-1
SDG Number: 03E1558144

Login Number: 3519
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 11/21/22 08:46 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Generated 11/29/2022 8:54:24 AM

JOB DESCRIPTION

PLU 18 TWR Sat Battery
SDG NUMBER 03E1558144

JOB NUMBER

890-3521-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 2/29/2024 4:12:30 PM

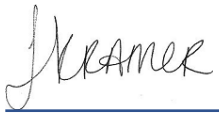
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



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11/29/2022 8:54:24 AM

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

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Laboratory Job ID: 890-3521-1
SDG: 03E1558144

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Definitions/Glossary

Client: Ensolum Job ID: 890-3521-1
Project/Site: PLU 18 TWR Sat Battery SDG: 03E1558144

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

Job ID: 890-3521-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3521-1

Receipt
The sample was received on 11/18/2022 8:20 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 4.2°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SS08 (890-3521-1).

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: The surrogate recovery for the blank associated with preparation batch 880-40137 and analytical batch 880-40032 was outside the upper control limits.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

Client Sample ID: SS08

Date Collected: 11/16/22 13:15
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

Lab Sample ID: 890-3521-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/28/22 09:59	11/28/22 20:06	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/28/22 09:59	11/28/22 20:06	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/28/22 09:59	11/28/22 20:06	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/28/22 09:59	11/28/22 20:06	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/28/22 09:59	11/28/22 20:06	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/28/22 09:59	11/28/22 20:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*11/28/22 09:59*	*11/28/22 20:06*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*11/28/22 09:59*	*11/28/22 20:06*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/29/22 09:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/22/22 10:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/21/22 17:39	11/22/22 01:36	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/21/22 17:39	11/22/22 01:36	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/21/22 17:39	11/22/22 01:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*11/21/22 17:39*	*11/22/22 01:36*	*1*
o-Terphenyl	*116*		*70 - 130*	*11/21/22 17:39*	*11/22/22 01:36*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**49.4**		5.00		mg/Kg			11/23/22 20:08	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

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)										
890-3503-A-1-C MS	Matrix Spike	105	110										
890-3503-A-1-D MSD	Matrix Spike Duplicate	100	110										
890-3521-1	SS08	92	113										
LCS 880-40407/1-A	Lab Control Sample	107	105										
LCSD 880-40407/2-A	Lab Control Sample Dup	103	114										
MB 880-40407/5-A	Method Blank	80	103										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-3514-A-1-C MS	Matrix Spike	117	119										
890-3514-A-1-D MSD	Matrix Spike Duplicate	115	113										
890-3521-1	SS08	106	116										
LCS 880-40137/2-A	Lab Control Sample	89	101										
LCSD 880-40137/3-A	Lab Control Sample Dup	91	101										
MB 880-40137/1-A	Method Blank	129	154 S1+										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40407/5-A
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40407

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/28/22 09:59	11/28/22 12:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*11/28/22 09:59*	*11/28/22 12:11*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*11/28/22 09:59*	*11/28/22 12:11*	*1*

Lab Sample ID: LCS 880-40407/1-A
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40407

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	0.1006		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.1080		mg/Kg		108	70 - 130		
m-Xylene & p-Xylene			0.200	0.2161		mg/Kg		108	70 - 130		
o-Xylene			0.100	0.1070		mg/Kg		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 880-40407/2-A
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40407

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1068		mg/Kg		107	70 - 130	13	35
Toluene			0.100	0.1006		mg/Kg		101	70 - 130	0	35
Ethylbenzene			0.100	0.1024		mg/Kg		102	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.2084		mg/Kg		104	70 - 130	4	35
o-Xylene			0.100	0.1031		mg/Kg		103	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: 890-3503-A-1-C MS
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40407

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.100	0.09904		mg/Kg		99	70 - 130		
Toluene	<0.00201	U	0.100	0.08596		mg/Kg		86	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

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

Lab Sample ID: 890-3503-A-1-C MS
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40407

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.100	0.08173		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.201	0.1679		mg/Kg		84	70 - 130
o-Xylene	<0.00201	U	0.100	0.08293		mg/Kg		83	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 890-3503-A-1-D MSD
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40407

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0990	0.1026		mg/Kg		104	70 - 130	3	35
Toluene	<0.00201	U	0.0990	0.09200		mg/Kg		93	70 - 130	7	35
Ethylbenzene	<0.00201	U	0.0990	0.08517		mg/Kg		86	70 - 130	4	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1742		mg/Kg		88	70 - 130	4	35
o-Xylene	<0.00201	U	0.0990	0.08588		mg/Kg		87	70 - 130	3	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

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

Lab Sample ID: MB 880-40137/1-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40137

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		11/21/22 17:39	11/21/22 20:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*
o-Terphenyl	*154*	*S1+*	*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*

Lab Sample ID: LCS 880-40137/2-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1114		mg/Kg		111	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1081		mg/Kg		108	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

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

Lab Sample ID: LCS 880-40137/2-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: LCSD 880-40137/3-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1121		mg/Kg		112	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1074		mg/Kg		107	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: 890-3514-A-1-C MS
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40137

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	66.7		998	1181		mg/Kg		112	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1041		mg/Kg		104	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	117		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: 890-3514-A-1-D MSD
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40137

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	66.7		997	1183		mg/Kg		112	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	1016		mg/Kg		102	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	113		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40010/1-A
Matrix: Solid
Analysis Batch: 40325

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			11/23/22 19:11	1

Lab Sample ID: LCS 880-40010/2-A
Matrix: Solid
Analysis Batch: 40325

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	243.9		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-40010/3-A
Matrix: Solid
Analysis Batch: 40325

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	246.3		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-3519-A-1-B MS
Matrix: Solid
Analysis Batch: 40325

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	57.9		249	281.5		mg/Kg		90	90 - 110		

Lab Sample ID: 890-3519-A-1-C MSD
Matrix: Solid
Analysis Batch: 40325

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	57.9		249	287.5		mg/Kg		92	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

GC VOA

Analysis Batch: 40362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3521-1	SS08	Total/NA	Solid	8021B	40407
MB 880-40407/5-A	Method Blank	Total/NA	Solid	8021B	40407
LCS 880-40407/1-A	Lab Control Sample	Total/NA	Solid	8021B	40407
LCSD 880-40407/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40407
890-3503-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	40407
890-3503-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40407

Prep Batch: 40407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3521-1	SS08	Total/NA	Solid	5035	
MB 880-40407/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40407/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40407/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3503-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-3503-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3521-1	SS08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 40032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3521-1	SS08	Total/NA	Solid	8015B NM	40137
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015B NM	40137
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40137
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40137
890-3514-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	40137
890-3514-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	40137

Prep Batch: 40137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3521-1	SS08	Total/NA	Solid	8015NM Prep	
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3514-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3514-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3521-1	SS08	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 40010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3521-1	SS08	Soluble	Solid	DI Leach	
MB 880-40010/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

HPLC/IC (Continued)

Leach Batch: 40010 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3519-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 40325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3521-1	SS08	Soluble	Solid	300.0	40010
MB 880-40010/1-A	Method Blank	Soluble	Solid	300.0	40010
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	300.0	40010
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40010
890-3519-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	40010
890-3519-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	40010

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

Client Sample ID: SS08

Date Collected: 11/16/22 13:15
Date Received: 11/18/22 08:20

Lab Sample ID: 890-3521-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	40407	11/28/22 09:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40362	11/28/22 20:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40559	11/29/22 09:20	SM	EET MID
Total/NA	Analysis	8015 NM		1			40194	11/22/22 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	40137	11/21/22 17:39	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40032	11/22/22 01:36	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	40010	11/20/22 12:21	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40325	11/23/22 20:08	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: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

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: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3521-1	SS08	Solid	11/16/22 13:15	11/18/22 08:20	0.5'

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11/29/2022

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Enselum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337-257-8307 Email:		tmorrissey@enselum.com

Work Order Comments

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

Project Name:	PLU 18 TWR Sat. Battery	Turn Around	
Project Number:	03E1558144	☑ Routine ☐ Rush	
Project Location:	32.20635, -103.81299	Due Date:	
Sampler's Name:	Meredith Roberts	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT	Temp Blank: (Yes) No	Wet Ice: (Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	TM0007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.4
Total Containers:		Corrected Temperature:	4.2

ANALYSIS REQUEST

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chlorides	BTEX	TPH	Sample Comments
SS08	S	11/16/22	1315	0.5'	G	1		X	X	X	Incident #: nAPP2230551957
											Cost Center: 2111031001

890-3521 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		11.18.22 820	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 11/10/2023 1:29:49 PM

Released to Imaging: 2/29/2024 4:12:50 PM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3521-1
SDG Number: 03E1558144

Login Number: 3521
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3521-1
SDG Number: 03E1558144

Login Number: 3521
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 11/21/22 08:46 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 12/28/2022 11:18:43 AM

JOB DESCRIPTION

PLU 18 TWR Sat Battery
SDG NUMBER 03E1558144

JOB NUMBER

890-3665-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

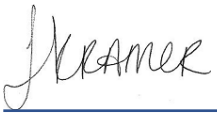
Released to Imaging: 2/29/2024 4:12:30 PM

Eurofins Carlsbad

Job Notes

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

Authorization



Generated
12/28/2022 11:18:43 AM

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

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Laboratory Job ID: 890-3665-1
SDG: 03E1558144

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Definitions/Glossary

Client: Ensolum Job ID: 890-3665-1
Project/Site: PLU 18 TWR Sat Battery SDG: 03E1558144

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, 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: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Job ID: 890-3665-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3665-1

Receipt
The samples were received on 12/15/2022 3:40 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH01 (890-3665-1), PH01A (890-3665-2), PH02 (890-3665-3), PH03 (890-3665-4), PH04 (890-3665-5), PH05 (890-3665-6), PH05A (890-3665-7), PH06 (890-3665-8), PH06A (890-3665-9), PH07 (890-3665-10), PH07A (890-3665-11), PH08 (890-3665-12) and PH08A (890-3665-13).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: PH01A (890-3665-2), PH05A (890-3665-7), PH06 (890-3665-8) and PH07 (890-3665-10). 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: PH08A (890-3665-13). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-3665-A-1-B MS). 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 880-41935 and analytical batch 880-42343 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-41936 and analytical batch 880-42534 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: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH01

Lab Sample ID: 890-3665-1
Matrix: Solid
Date Collected: 12/15/22 12:20
Date Received: 12/15/22 15:40
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		12/27/22 10:51	12/28/22 00:08	1
Toluene	<0.00201	U	0.00201		mg/Kg		12/27/22 10:51	12/28/22 00:08	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		12/27/22 10:51	12/28/22 00:08	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		12/27/22 10:51	12/28/22 00:08	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		12/27/22 10:51	12/28/22 00:08	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		12/27/22 10:51	12/28/22 00:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*12/27/22 10:51*	*12/28/22 00:08*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*12/27/22 10:51*	*12/28/22 00:08*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/19/22 17:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 11:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 11:15	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 11:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*12/19/22 08:49*	*12/19/22 11:15*	*1*
o-Terphenyl	*101*		*70 - 130*	*12/19/22 08:49*	*12/19/22 11:15*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3300**		25.0		mg/Kg			12/27/22 19:33	5

Client Sample ID: PH01A

Lab Sample ID: 890-3665-2
Matrix: Solid
Date Collected: 12/15/22 12:30
Date Received: 12/15/22 15:40
Sample Depth: 4'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 00:29	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 00:29	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 00:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/27/22 10:51	12/28/22 00:29	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 00:29	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/27/22 10:51	12/28/22 00:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*41*	*S1-*	*70 - 130*	*12/27/22 10:51*	*12/28/22 00:29*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH01A

Date Collected: 12/15/22 12:30
Date Received: 12/15/22 15:40
Sample Depth: 4'

Lab Sample ID: 890-3665-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*12/27/22 10:51*	*12/28/22 00:29*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			12/19/22 17:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		12/19/22 08:49	12/19/22 12:19	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		12/19/22 08:49	12/19/22 12:19	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/19/22 08:49	12/19/22 12:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*12/19/22 08:49*	*12/19/22 12:19*	*1*
o-Terphenyl	*85*		*70 - 130*	*12/19/22 08:49*	*12/19/22 12:19*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**37.8**		5.00	mg/Kg			12/27/22 19:38	1

Client Sample ID: PH02

Date Collected: 12/15/22 11:10
Date Received: 12/15/22 15:40
Sample Depth: 4'

Lab Sample ID: 890-3665-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		12/27/22 10:51	12/28/22 00:49	1
Toluene	<0.00199	U	0.00199	mg/Kg		12/27/22 10:51	12/28/22 00:49	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		12/27/22 10:51	12/28/22 00:49	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		12/27/22 10:51	12/28/22 00:49	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		12/27/22 10:51	12/28/22 00:49	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		12/27/22 10:51	12/28/22 00:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*12/27/22 10:51*	*12/28/22 00:49*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*12/27/22 10:51*	*12/28/22 00:49*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			12/19/22 17:50	1

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH02

Date Collected: 12/15/22 11:10
Date Received: 12/15/22 15:40
Sample Depth: 4'

Lab Sample ID: 890-3665-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 12:39	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 12:39	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 12:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*12/19/22 08:49*	*12/19/22 12:39*	*1*
o-Terphenyl	*89*		*70 - 130*	*12/19/22 08:49*	*12/19/22 12:39*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**148**		5.04		mg/Kg			12/28/22 08:42	1

Client Sample ID: PH03

Date Collected: 12/15/22 13:30
Date Received: 12/15/22 15:40
Sample Depth: 4'

Lab Sample ID: 890-3665-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 01:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 01:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 01:10	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/27/22 10:51	12/28/22 01:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 01:10	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/27/22 10:51	12/28/22 01:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*12/27/22 10:51*	*12/28/22 01:10*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*12/27/22 10:51*	*12/28/22 01:10*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/19/22 17:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 13:01	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 13:01	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 13:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*12/19/22 08:49*	*12/19/22 13:01*	*1*
o-Terphenyl	*101*		*70 - 130*	*12/19/22 08:49*	*12/19/22 13:01*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH03

Lab Sample ID: 890-3665-4
Matrix: Solid
Date Collected: 12/15/22 13:30
Date Received: 12/15/22 15:40
Sample Depth: 4'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	217		4.97		mg/Kg			12/27/22 19:45	1

Client Sample ID: PH04

Lab Sample ID: 890-3665-5
Matrix: Solid
Date Collected: 12/15/22 09:40
Date Received: 12/15/22 15:40
Sample Depth: 4'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 01:30	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 01:30	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 01:30	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/27/22 10:51	12/28/22 01:30	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 01:30	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/27/22 10:51	12/28/22 01:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*12/27/22 10:51*	*12/28/22 01:30*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*12/27/22 10:51*	*12/28/22 01:30*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/19/22 17:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 13:22	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 13:22	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*12/19/22 08:49*	*12/19/22 13:22*	*1*
o-Terphenyl	*84*		*70 - 130*	*12/19/22 08:49*	*12/19/22 13:22*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	86.6		5.02		mg/Kg			12/27/22 19:50	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH05

Date Collected: 12/15/22 10:10
Date Received: 12/15/22 15:40
Sample Depth: 3'

Lab Sample ID: 890-3665-6
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 01:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 01:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 01:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/27/22 10:51	12/28/22 01:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 01:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/27/22 10:51	12/28/22 01:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*12/27/22 10:51*	*12/28/22 01:51*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*12/27/22 10:51*	*12/28/22 01:51*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/19/22 17:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 13:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 13:43	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 13:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*12/19/22 08:49*	*12/19/22 13:43*	*1*
o-Terphenyl	*88*		*70 - 130*	*12/19/22 08:49*	*12/19/22 13:43*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1960**		25.0		mg/Kg			12/27/22 19:54	5

Client Sample ID: PH05A

Date Collected: 12/15/22 10:15
Date Received: 12/15/22 15:40
Sample Depth: 4'

Lab Sample ID: 890-3665-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 02:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 02:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 02:12	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		12/27/22 10:51	12/28/22 02:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 02:12	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		12/27/22 10:51	12/28/22 02:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*12/27/22 10:51*	*12/28/22 02:12*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH05A

Date Collected: 12/15/22 10:15
Date Received: 12/15/22 15:40
Sample Depth: 4'

Lab Sample ID: 890-3665-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*59*	*S1-*	*70 - 130*	*12/27/22 10:51*	*12/28/22 02:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			12/19/22 17:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		12/19/22 08:49	12/19/22 14:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		12/19/22 08:49	12/19/22 14:04	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/19/22 08:49	12/19/22 14:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*12/19/22 08:49*	*12/19/22 14:04*	*1*
o-Terphenyl	*109*		*70 - 130*	*12/19/22 08:49*	*12/19/22 14:04*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1210**		4.96	mg/Kg			12/27/22 19:59	1

Client Sample ID: PH06

Date Collected: 12/15/22 10:25
Date Received: 12/15/22 15:40
Sample Depth: 1'

Lab Sample ID: 890-3665-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		12/27/22 10:51	12/28/22 02:32	1
Toluene	<0.00199	U	0.00199	mg/Kg		12/27/22 10:51	12/28/22 02:32	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		12/27/22 10:51	12/28/22 02:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		12/27/22 10:51	12/28/22 02:32	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		12/27/22 10:51	12/28/22 02:32	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		12/27/22 10:51	12/28/22 02:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*61*	*S1-*	*70 - 130*	*12/27/22 10:51*	*12/28/22 02:32*	*1*
1,4-Difluorobenzene (Surr)	*57*	*S1-*	*70 - 130*	*12/27/22 10:51*	*12/28/22 02:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			12/19/22 17:50	1

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH06

Date Collected: 12/15/22 10:25
Date Received: 12/15/22 15:40
Sample Depth: 1'

Lab Sample ID: 890-3665-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 14:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 14:25	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 14:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*12/19/22 08:49*	*12/19/22 14:25*	*1*
o-Terphenyl	*101*		*70 - 130*	*12/19/22 08:49*	*12/19/22 14:25*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1360**		24.9		mg/Kg			12/23/22 20:30	5

Client Sample ID: PH06A

Date Collected: 12/15/22 10:40
Date Received: 12/15/22 15:40
Sample Depth: 4'

Lab Sample ID: 890-3665-9
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 02:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 02:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 02:53	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/27/22 10:51	12/28/22 02:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 02:53	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/27/22 10:51	12/28/22 02:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*12/27/22 10:51*	*12/28/22 02:53*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*12/27/22 10:51*	*12/28/22 02:53*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/19/22 17:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 14:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 14:46	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 14:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*12/19/22 08:49*	*12/19/22 14:46*	*1*
o-Terphenyl	*90*		*70 - 130*	*12/19/22 08:49*	*12/19/22 14:46*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH06A

Lab Sample ID: 890-3665-9
Matrix: Solid
Date Collected: 12/15/22 10:40
Date Received: 12/15/22 15:40
Sample Depth: 4'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1280		25.0		mg/Kg			12/23/22 20:39	5

Client Sample ID: PH07

Lab Sample ID: 890-3665-10
Matrix: Solid
Date Collected: 12/15/22 12:35
Date Received: 12/15/22 15:40
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		12/27/22 10:51	12/28/22 03:14	1
Toluene	<0.00201	U	0.00201		mg/Kg		12/27/22 10:51	12/28/22 03:14	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		12/27/22 10:51	12/28/22 03:14	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		12/27/22 10:51	12/28/22 03:14	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		12/27/22 10:51	12/28/22 03:14	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		12/27/22 10:51	12/28/22 03:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*12/27/22 10:51*	*12/28/22 03:14*	*1*
1,4-Difluorobenzene (Surr)	*63*	*S1-*	*70 - 130*	*12/27/22 10:51*	*12/28/22 03:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/20/22 09:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/19/22 08:52	12/19/22 13:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/19/22 08:52	12/19/22 13:43	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/19/22 08:52	12/19/22 13:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*12/19/22 08:52*	*12/19/22 13:43*	*1*
o-Terphenyl	*93*		*70 - 130*	*12/19/22 08:52*	*12/19/22 13:43*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3440		25.2		mg/Kg			12/23/22 20:48	5

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH07A

Lab Sample ID: 890-3665-11
Matrix: Solid
Date Collected: 12/15/22 12:50
Date Received: 12/15/22 15:40
Sample Depth: 4'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 04:37	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 04:37	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 04:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/27/22 10:51	12/28/22 04:37	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 04:37	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/27/22 10:51	12/28/22 04:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*12/27/22 10:51*	*12/28/22 04:37*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*12/27/22 10:51*	*12/28/22 04:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/20/22 09:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/19/22 08:52	12/19/22 14:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/19/22 08:52	12/19/22 14:04	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/19/22 08:52	12/19/22 14:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*12/19/22 08:52*	*12/19/22 14:04*	*1*
o-Terphenyl	*92*		*70 - 130*	*12/19/22 08:52*	*12/19/22 14:04*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**405**		4.97		mg/Kg			12/24/22 11:47	1

Client Sample ID: PH08

Lab Sample ID: 890-3665-12
Matrix: Solid
Date Collected: 12/15/22 12:55
Date Received: 12/15/22 15:40
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 08:15	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 08:15	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 08:15	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/27/22 10:51	12/28/22 08:15	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 08:15	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/27/22 10:51	12/28/22 08:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*12/27/22 10:51*	*12/28/22 08:15*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH08

Date Collected: 12/15/22 12:55
Date Received: 12/15/22 15:40
Sample Depth: 1'

Lab Sample ID: 890-3665-12
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*12/27/22 10:51*	*12/28/22 08:15*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			12/20/22 09:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/19/22 08:52	12/19/22 14:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/19/22 08:52	12/19/22 14:25	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/19/22 08:52	12/19/22 14:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*71*		*70 - 130*	*12/19/22 08:52*	*12/19/22 14:25*	*1*
o-Terphenyl	*72*		*70 - 130*	*12/19/22 08:52*	*12/19/22 14:25*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1070**		4.99	mg/Kg			12/24/22 11:55	1

Client Sample ID: PH08A

Date Collected: 12/15/22 13:10
Date Received: 12/15/22 15:40
Sample Depth: 4'

Lab Sample ID: 890-3665-13
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/27/22 10:51	12/28/22 08:36	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/27/22 10:51	12/28/22 08:36	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/27/22 10:51	12/28/22 08:36	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		12/27/22 10:51	12/28/22 08:36	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/27/22 10:51	12/28/22 08:36	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		12/27/22 10:51	12/28/22 08:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*56*	*S1-*	*70 - 130*	*12/27/22 10:51*	*12/28/22 08:36*	*1*
1,4-Difluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*12/27/22 10:51*	*12/28/22 08:36*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			12/20/22 09:50	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH08A

Date Collected: 12/15/22 13:10
Date Received: 12/15/22 15:40
Sample Depth: 4'

Lab Sample ID: 890-3665-13

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/19/22 08:52	12/19/22 14:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/19/22 08:52	12/19/22 14:46	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/19/22 08:52	12/19/22 14:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*12/19/22 08:52*	*12/19/22 14:46*	*1*
o-Terphenyl	*90*		*70 - 130*	*12/19/22 08:52*	*12/19/22 14:46*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**275**		5.03		mg/Kg			12/24/22 12:04	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-3665-1	PH01	109	87
890-3665-1 MS	PH01	102	95
890-3665-1 MSD	PH01	107	99
890-3665-2	PH01A	41 S1-	80
890-3665-3	PH02	126	97
890-3665-4	PH03	114	78
890-3665-5	PH04	124	102
890-3665-6	PH05	130	94
890-3665-7	PH05A	69 S1-	59 S1-
890-3665-8	PH06	61 S1-	57 S1-
890-3665-9	PH06A	112	103
890-3665-10	PH07	101	63 S1-
890-3665-11	PH07A	112	93
890-3665-12	PH08	109	70
890-3665-13	PH08A	56 S1-	69 S1-
LCS 880-42682/1-A	Lab Control Sample	103	99
LCSD 880-42682/2-A	Lab Control Sample Dup	100	96
MB 880-42531/5-A	Method Blank	95	93
MB 880-42682/5-A	Method Blank	100	93

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-3665-1	PH01	97	101
890-3665-1 MS	PH01	79	69 S1-
890-3665-1 MSD	PH01	80	70
890-3665-2	PH01A	85	85
890-3665-3	PH02	86	89
890-3665-4	PH03	100	101
890-3665-5	PH04	85	84
890-3665-6	PH05	87	88
890-3665-7	PH05A	106	109
890-3665-8	PH06	99	101
890-3665-9	PH06A	88	90
890-3665-10	PH07	89	93
890-3665-11	PH07A	88	92
890-3665-12	PH08	71	72
890-3665-13	PH08A	88	90
890-3669-A-1-B MS	Matrix Spike	79	72
890-3669-A-1-C MSD	Matrix Spike Duplicate	80	72
LCS 880-42126/2-A	Lab Control Sample	123	121
LCS 880-42127/2-A	Lab Control Sample	92	100
LCSD 880-42126/3-A	Lab Control Sample Dup	111	108

Surrogate Summary

Client: Ensolum Job ID: 890-3665-1
Project/Site: PLU 18 TWR Sat Battery SDG: 03E1558144

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
		1CO1	OTPH1								
Lab Sample ID	Client Sample ID	(70-130)	(70-130)								
LCSD 880-42127/3-A	Lab Control Sample Dup	83	91								
MB 880-42126/1-A	Method Blank	101	108								
MB 880-42127/1-A	Method Blank	102	109								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42531/5-A
Matrix: Solid
Analysis Batch: 42623

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42531

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/22/22 14:30	12/27/22 13:02	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/22/22 14:30	12/27/22 13:02	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/22/22 14:30	12/27/22 13:02	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/22/22 14:30	12/27/22 13:02	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/22/22 14:30	12/27/22 13:02	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/22/22 14:30	12/27/22 13:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*12/22/22 14:30*	*12/27/22 13:02*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*12/22/22 14:30*	*12/27/22 13:02*	*1*

Lab Sample ID: MB 880-42682/5-A
Matrix: Solid
Analysis Batch: 42623

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42682

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/27/22 23:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/27/22 23:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/27/22 23:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/27/22 10:51	12/27/22 23:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/27/22 23:46	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/27/22 10:51	12/27/22 23:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*12/27/22 10:51*	*12/27/22 23:46*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*12/27/22 10:51*	*12/27/22 23:46*	*1*

Lab Sample ID: LCS 880-42682/1-A
Matrix: Solid
Analysis Batch: 42623

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42682

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09207		mg/Kg		92	70 - 130		
Toluene			0.100	0.09011		mg/Kg		90	70 - 130		
Ethylbenzene			0.100	0.08511		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			0.200	0.1881		mg/Kg		94	70 - 130		
o-Xylene			0.100	0.09609		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 880-42682/2-A
Matrix: Solid
Analysis Batch: 42623

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42682

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08700		mg/Kg		87	70 - 130	6	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

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

Lab Sample ID: LCSD 880-42682/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42623 — **Prep Batch: 42682**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.08558		mg/Kg		86	70 - 130	5	35
Ethylbenzene			0.100	0.08052		mg/Kg		81	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1781		mg/Kg		89	70 - 130	5	35
o-Xylene			0.100	0.09154		mg/Kg		92	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 890-3665-1 MS — **Client Sample ID: PH01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42623 — **Prep Batch: 42682**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.0998	0.08738		mg/Kg		88	70 - 130
Toluene	<0.00201	U	0.0998	0.08709		mg/Kg		86	70 - 130
Ethylbenzene	<0.00201	U	0.0998	0.08016		mg/Kg		80	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1747		mg/Kg		88	70 - 130
o-Xylene	<0.00201	U	0.0998	0.08894		mg/Kg		89	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 890-3665-1 MSD — **Client Sample ID: PH01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42623 — **Prep Batch: 42682**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0990	0.09707		mg/Kg		98	70 - 130	11	35
Toluene	<0.00201	U	0.0990	0.09361		mg/Kg		94	70 - 130	7	35
Ethylbenzene	<0.00201	U	0.0990	0.08619		mg/Kg		87	70 - 130	7	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1872		mg/Kg		95	70 - 130	7	35
o-Xylene	<0.00201	U	0.0990	0.09547		mg/Kg		96	70 - 130	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

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

Lab Sample ID: MB 880-42126/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42117 — **Prep Batch: 42126**

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		12/19/22 08:09	12/19/22 08:42	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

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

Lab Sample ID: MB 880-42126/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42117 — **Prep Batch: 42126**

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		12/19/22 08:09	12/19/22 08:42	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/19/22 08:09	12/19/22 08:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*12/19/22 08:09*	*12/19/22 08:42*	*1*
o-Terphenyl	*108*		*70 - 130*	*12/19/22 08:09*	*12/19/22 08:42*	*1*

Lab Sample ID: LCS 880-42126/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42117 — **Prep Batch: 42126**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1044		mg/Kg		104	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1028		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*123*		*70 - 130*
o-Terphenyl	*121*		*70 - 130*

Lab Sample ID: LCSD 880-42126/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42117 — **Prep Batch: 42126**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	879.7		mg/Kg		88	70 - 130	17	20
Diesel Range Organics (Over C10-C28)			1000	894.3		mg/Kg		89	70 - 130	14	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*111*		*70 - 130*
o-Terphenyl	*108*		*70 - 130*

Lab Sample ID: 890-3665-1 MS — **Client Sample ID: PH01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42117 — **Prep Batch: 42126**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	886.2		mg/Kg		86	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	999	744.9		mg/Kg		75	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*79*		*70 - 130*
o-Terphenyl	*69*	*S1-*	*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

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

Lab Sample ID: 890-3665-1 MSD — **Client Sample ID: PH01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42117 — **Prep Batch: 42126**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	858.6		mg/Kg		84	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	757.5		mg/Kg		76	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*80*		*70 - 130*
o-Terphenyl	*70*		*70 - 130*

Lab Sample ID: MB 880-42127/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42119 — **Prep Batch: 42127**

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		12/19/22 08:40	12/19/22 08:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/19/22 08:40	12/19/22 08:42	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/19/22 08:40	12/19/22 08:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*12/19/22 08:40*	*12/19/22 08:42*	*1*
o-Terphenyl	*109*		*70 - 130*	*12/19/22 08:40*	*12/19/22 08:42*	*1*

Lab Sample ID: LCS 880-42127/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42119 — **Prep Batch: 42127**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	828.3		mg/Kg		83	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	784.8		mg/Kg		78	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*100*		*70 - 130*

Lab Sample ID: LCSD 880-42127/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42119 — **Prep Batch: 42127**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	755.1		mg/Kg		76	70 - 130	9	20
Diesel Range Organics (Over C10-C28)			1000	749.2		mg/Kg		75	70 - 130	5	20

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

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

Lab Sample ID: LCSD 880-42127/3-A
Matrix: Solid
Analysis Batch: 42119

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42127

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	83		70 - 130
o-Terphenyl	91		70 - 130

Lab Sample ID: 890-3669-A-1-B MS
Matrix: Solid
Analysis Batch: 42119

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42127

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	960.5		mg/Kg		94	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	999	792.9		mg/Kg		76	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	79		70 - 130
o-Terphenyl	72		70 - 130

Lab Sample ID: 890-3669-A-1-C MSD
Matrix: Solid
Analysis Batch: 42119

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 42127

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	966.6		mg/Kg		95	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	786.3		mg/Kg		76	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	80		70 - 130
o-Terphenyl	72		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-41932/1-A
Matrix: Solid
Analysis Batch: 42332

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			12/23/22 16:26	1

Lab Sample ID: LCS 880-41932/2-A
Matrix: Solid
Analysis Batch: 42332

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	264.6		mg/Kg		106	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-41932/3-A
Matrix: Solid
Analysis Batch: 42332

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	264.9		mg/Kg		106	90 - 110	0	20

Lab Sample ID: 890-3660-A-3-B MS
Matrix: Solid
Analysis Batch: 42332

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	297		248	566.1		mg/Kg		109	90 - 110		

Lab Sample ID: 890-3660-A-3-C MSD
Matrix: Solid
Analysis Batch: 42332

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	297		248	548.6		mg/Kg		102	90 - 110	3	20

Lab Sample ID: MB 880-41935/1-A
Matrix: Solid
Analysis Batch: 42343

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			12/24/22 07:42	1

Lab Sample ID: LCS 880-41935/2-A
Matrix: Solid
Analysis Batch: 42343

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	262.2		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-41935/3-A
Matrix: Solid
Analysis Batch: 42343

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	273.7		mg/Kg		109	90 - 110	4	20

Lab Sample ID: 880-22792-A-8-B MS
Matrix: Solid
Analysis Batch: 42343

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	63.6	F1	248	361.4	F1	mg/Kg		120	90 - 110		

Lab Sample ID: 880-22792-A-8-C MSD
Matrix: Solid
Analysis Batch: 42343

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	63.6	F1	248	376.1	F1	mg/Kg		126	90 - 110	4	20

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-41936/1-A
Matrix: Solid
Analysis Batch: 42534

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			12/27/22 17:35	1

Lab Sample ID: LCS 880-41936/2-A
Matrix: Solid
Analysis Batch: 42534

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	265.3		mg/Kg		106	90 - 110		

Lab Sample ID: LCSD 880-41936/3-A
Matrix: Solid
Analysis Batch: 42534

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	265.3		mg/Kg		106	90 - 110	0	20

Lab Sample ID: 880-22791-A-6-B MS
Matrix: Solid
Analysis Batch: 42534

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	18600	F1	5040	24900	F1	mg/Kg		125	90 - 110		

Lab Sample ID: 880-22791-A-6-C MSD
Matrix: Solid
Analysis Batch: 42534

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	18600	F1	5040	25550	F1	mg/Kg		138	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

GC VOA

Prep Batch: 42531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-42531/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 42623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-1	PH01	Total/NA	Solid	8021B	42682
890-3665-2	PH01A	Total/NA	Solid	8021B	42682
890-3665-3	PH02	Total/NA	Solid	8021B	42682
890-3665-4	PH03	Total/NA	Solid	8021B	42682
890-3665-5	PH04	Total/NA	Solid	8021B	42682
890-3665-6	PH05	Total/NA	Solid	8021B	42682
890-3665-7	PH05A	Total/NA	Solid	8021B	42682
890-3665-8	PH06	Total/NA	Solid	8021B	42682
890-3665-9	PH06A	Total/NA	Solid	8021B	42682
890-3665-10	PH07	Total/NA	Solid	8021B	42682
890-3665-11	PH07A	Total/NA	Solid	8021B	42682
890-3665-12	PH08	Total/NA	Solid	8021B	42682
890-3665-13	PH08A	Total/NA	Solid	8021B	42682
MB 880-42531/5-A	Method Blank	Total/NA	Solid	8021B	42531
MB 880-42682/5-A	Method Blank	Total/NA	Solid	8021B	42682
LCS 880-42682/1-A	Lab Control Sample	Total/NA	Solid	8021B	42682
LCSD 880-42682/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	42682
890-3665-1 MS	PH01	Total/NA	Solid	8021B	42682
890-3665-1 MSD	PH01	Total/NA	Solid	8021B	42682

Prep Batch: 42682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-1	PH01	Total/NA	Solid	5035	
890-3665-2	PH01A	Total/NA	Solid	5035	
890-3665-3	PH02	Total/NA	Solid	5035	
890-3665-4	PH03	Total/NA	Solid	5035	
890-3665-5	PH04	Total/NA	Solid	5035	
890-3665-6	PH05	Total/NA	Solid	5035	
890-3665-7	PH05A	Total/NA	Solid	5035	
890-3665-8	PH06	Total/NA	Solid	5035	
890-3665-9	PH06A	Total/NA	Solid	5035	
890-3665-10	PH07	Total/NA	Solid	5035	
890-3665-11	PH07A	Total/NA	Solid	5035	
890-3665-12	PH08	Total/NA	Solid	5035	
890-3665-13	PH08A	Total/NA	Solid	5035	
MB 880-42682/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-42682/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-42682/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3665-1 MS	PH01	Total/NA	Solid	5035	
890-3665-1 MSD	PH01	Total/NA	Solid	5035	

Analysis Batch: 42785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-1	PH01	Total/NA	Solid	Total BTEX	
890-3665-2	PH01A	Total/NA	Solid	Total BTEX	
890-3665-3	PH02	Total/NA	Solid	Total BTEX	
890-3665-4	PH03	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

GC VOA (Continued)

Analysis Batch: 42785 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-5	PH04	Total/NA	Solid	Total BTEX	
890-3665-6	PH05	Total/NA	Solid	Total BTEX	
890-3665-7	PH05A	Total/NA	Solid	Total BTEX	
890-3665-8	PH06	Total/NA	Solid	Total BTEX	
890-3665-9	PH06A	Total/NA	Solid	Total BTEX	
890-3665-10	PH07	Total/NA	Solid	Total BTEX	
890-3665-11	PH07A	Total/NA	Solid	Total BTEX	
890-3665-12	PH08	Total/NA	Solid	Total BTEX	
890-3665-13	PH08A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 42117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-1	PH01	Total/NA	Solid	8015B NM	42126
890-3665-2	PH01A	Total/NA	Solid	8015B NM	42126
890-3665-3	PH02	Total/NA	Solid	8015B NM	42126
890-3665-4	PH03	Total/NA	Solid	8015B NM	42126
890-3665-5	PH04	Total/NA	Solid	8015B NM	42126
890-3665-6	PH05	Total/NA	Solid	8015B NM	42126
890-3665-7	PH05A	Total/NA	Solid	8015B NM	42126
890-3665-8	PH06	Total/NA	Solid	8015B NM	42126
890-3665-9	PH06A	Total/NA	Solid	8015B NM	42126
MB 880-42126/1-A	Method Blank	Total/NA	Solid	8015B NM	42126
LCS 880-42126/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42126
LCSD 880-42126/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42126
890-3665-1 MS	PH01	Total/NA	Solid	8015B NM	42126
890-3665-1 MSD	PH01	Total/NA	Solid	8015B NM	42126

Analysis Batch: 42119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-10	PH07	Total/NA	Solid	8015B NM	42127
890-3665-11	PH07A	Total/NA	Solid	8015B NM	42127
890-3665-12	PH08	Total/NA	Solid	8015B NM	42127
890-3665-13	PH08A	Total/NA	Solid	8015B NM	42127
MB 880-42127/1-A	Method Blank	Total/NA	Solid	8015B NM	42127
LCS 880-42127/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42127
LCSD 880-42127/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42127
890-3669-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	42127
890-3669-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	42127

Prep Batch: 42126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-1	PH01	Total/NA	Solid	8015NM Prep	
890-3665-2	PH01A	Total/NA	Solid	8015NM Prep	
890-3665-3	PH02	Total/NA	Solid	8015NM Prep	
890-3665-4	PH03	Total/NA	Solid	8015NM Prep	
890-3665-5	PH04	Total/NA	Solid	8015NM Prep	
890-3665-6	PH05	Total/NA	Solid	8015NM Prep	
890-3665-7	PH05A	Total/NA	Solid	8015NM Prep	
890-3665-8	PH06	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

GC Semi VOA (Continued)

Prep Batch: 42126 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-9	PH06A	Total/NA	Solid	8015NM Prep	
MB 880-42126/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42126/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42126/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3665-1 MS	PH01	Total/NA	Solid	8015NM Prep	
890-3665-1 MSD	PH01	Total/NA	Solid	8015NM Prep	

Prep Batch: 42127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-10	PH07	Total/NA	Solid	8015NM Prep	
890-3665-11	PH07A	Total/NA	Solid	8015NM Prep	
890-3665-12	PH08	Total/NA	Solid	8015NM Prep	
890-3665-13	PH08A	Total/NA	Solid	8015NM Prep	
MB 880-42127/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42127/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42127/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3669-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3669-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 42277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-1	PH01	Total/NA	Solid	8015 NM	
890-3665-2	PH01A	Total/NA	Solid	8015 NM	
890-3665-3	PH02	Total/NA	Solid	8015 NM	
890-3665-4	PH03	Total/NA	Solid	8015 NM	
890-3665-5	PH04	Total/NA	Solid	8015 NM	
890-3665-6	PH05	Total/NA	Solid	8015 NM	
890-3665-7	PH05A	Total/NA	Solid	8015 NM	
890-3665-8	PH06	Total/NA	Solid	8015 NM	
890-3665-9	PH06A	Total/NA	Solid	8015 NM	
890-3665-10	PH07	Total/NA	Solid	8015 NM	
890-3665-11	PH07A	Total/NA	Solid	8015 NM	
890-3665-12	PH08	Total/NA	Solid	8015 NM	
890-3665-13	PH08A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 41932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-8	PH06	Soluble	Solid	DI Leach	
890-3665-9	PH06A	Soluble	Solid	DI Leach	
890-3665-10	PH07	Soluble	Solid	DI Leach	
MB 880-41932/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-41932/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-41932/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3660-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3660-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 41935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-11	PH07A	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

HPLC/IC (Continued)

Leach Batch: 41935 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-12	PH08	Soluble	Solid	DI Leach	
890-3665-13	PH08A	Soluble	Solid	DI Leach	
MB 880-41935/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-41935/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-41935/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-22792-A-8-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-22792-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 41936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-1	PH01	Soluble	Solid	DI Leach	
890-3665-2	PH01A	Soluble	Solid	DI Leach	
890-3665-3	PH02	Soluble	Solid	DI Leach	
890-3665-4	PH03	Soluble	Solid	DI Leach	
890-3665-5	PH04	Soluble	Solid	DI Leach	
890-3665-6	PH05	Soluble	Solid	DI Leach	
890-3665-7	PH05A	Soluble	Solid	DI Leach	
MB 880-41936/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-41936/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-41936/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-22791-A-6-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-22791-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 42332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-8	PH06	Soluble	Solid	300.0	41932
890-3665-9	PH06A	Soluble	Solid	300.0	41932
890-3665-10	PH07	Soluble	Solid	300.0	41932
MB 880-41932/1-A	Method Blank	Soluble	Solid	300.0	41932
LCS 880-41932/2-A	Lab Control Sample	Soluble	Solid	300.0	41932
LCSD 880-41932/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	41932
890-3660-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	41932
890-3660-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	41932

Analysis Batch: 42343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-11	PH07A	Soluble	Solid	300.0	41935
890-3665-12	PH08	Soluble	Solid	300.0	41935
890-3665-13	PH08A	Soluble	Solid	300.0	41935
MB 880-41935/1-A	Method Blank	Soluble	Solid	300.0	41935
LCS 880-41935/2-A	Lab Control Sample	Soluble	Solid	300.0	41935
LCSD 880-41935/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	41935
880-22792-A-8-B MS	Matrix Spike	Soluble	Solid	300.0	41935
880-22792-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	41935

Analysis Batch: 42534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-1	PH01	Soluble	Solid	300.0	41936
890-3665-2	PH01A	Soluble	Solid	300.0	41936
890-3665-3	PH02	Soluble	Solid	300.0	41936
890-3665-4	PH03	Soluble	Solid	300.0	41936

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

HPLC/IC (Continued)

Analysis Batch: 42534 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-5	PH04	Soluble	Solid	300.0	41936
890-3665-6	PH05	Soluble	Solid	300.0	41936
890-3665-7	PH05A	Soluble	Solid	300.0	41936
MB 880-41936/1-A	Method Blank	Soluble	Solid	300.0	41936
LCS 880-41936/2-A	Lab Control Sample	Soluble	Solid	300.0	41936
LCSD 880-41936/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	41936
880-22791-A-6-B MS	Matrix Spike	Soluble	Solid	300.0	41936
880-22791-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	41936

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH01

Date Collected: 12/15/22 12:20
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 00:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 11:15	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	41936	12/22/22 11:47	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	42534	12/27/22 19:33	CH	EET MID

Client Sample ID: PH01A

Date Collected: 12/15/22 12:30
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 00:29	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 12:19	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	41936	12/22/22 11:47	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42534	12/27/22 19:38	CH	EET MID

Client Sample ID: PH02

Date Collected: 12/15/22 11:10
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-3
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	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 00:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 12:39	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	41936	12/22/22 11:47	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42534	12/28/22 08:42	CH	EET MID

Client Sample ID: PH03

Date Collected: 12/15/22 13:30
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-4
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			5.01 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 01:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH03

Date Collected: 12/15/22 13:30
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-4
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			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 13:01	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	41936	12/22/22 11:47	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42534	12/27/22 19:45	CH	EET MID

Client Sample ID: PH04

Date Collected: 12/15/22 09:40
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 01:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 13:22	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	41936	12/22/22 11:47	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42534	12/27/22 19:50	CH	EET MID

Client Sample ID: PH05

Date Collected: 12/15/22 10:10
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 01:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 13:43	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	41936	12/22/22 11:47	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	42534	12/27/22 19:54	CH	EET MID

Client Sample ID: PH05A

Date Collected: 12/15/22 10:15
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-7
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			4.99 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 02:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 14:04	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH05A
Date Collected: 12/15/22 10:15
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	41936	12/22/22 11:47	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42534	12/27/22 19:59	CH	EET MID

Client Sample ID: PH06
Date Collected: 12/15/22 10:25
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 02:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 14:25	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	41932	12/19/22 14:26	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	42332	12/23/22 20:30	CH	EET MID

Client Sample ID: PH06A
Date Collected: 12/15/22 10:40
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 02:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 14:46	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	41932	12/19/22 14:26	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	42332	12/23/22 20:39	CH	EET MID

Client Sample ID: PH07
Date Collected: 12/15/22 12:35
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 03:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/20/22 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42127	12/19/22 08:52	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42119	12/19/22 13:43	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	41932	12/19/22 14:26	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	42332	12/23/22 20:48	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH07A

Date Collected: 12/15/22 12:50
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 04:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/20/22 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	42127	12/19/22 08:52	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42119	12/19/22 14:04	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	41935	12/19/22 14:45	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42343	12/24/22 11:47	CH	EET MID

Client Sample ID: PH08

Date Collected: 12/15/22 12:55
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-12
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	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 08:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/20/22 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42127	12/19/22 08:52	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42119	12/19/22 14:25	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	41935	12/19/22 14:45	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42343	12/24/22 11:55	CH	EET MID

Client Sample ID: PH08A

Date Collected: 12/15/22 13:10
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-13
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	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 08:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/20/22 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	42127	12/19/22 08:52	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42119	12/19/22 14:46	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	41935	12/19/22 14:45	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42343	12/24/22 12:04	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: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

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: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3665-1	PH01	Solid	12/15/22 12:20	12/15/22 15:40	2'
890-3665-2	PH01A	Solid	12/15/22 12:30	12/15/22 15:40	4'
890-3665-3	PH02	Solid	12/15/22 11:10	12/15/22 15:40	4'
890-3665-4	PH03	Solid	12/15/22 13:30	12/15/22 15:40	4'
890-3665-5	PH04	Solid	12/15/22 09:40	12/15/22 15:40	4'
890-3665-6	PH05	Solid	12/15/22 10:10	12/15/22 15:40	3'
890-3665-7	PH05A	Solid	12/15/22 10:15	12/15/22 15:40	4'
890-3665-8	PH06	Solid	12/15/22 10:25	12/15/22 15:40	1'
890-3665-9	PH06A	Solid	12/15/22 10:40	12/15/22 15:40	4'
890-3665-10	PH07	Solid	12/15/22 12:35	12/15/22 15:40	1'
890-3665-11	PH07A	Solid	12/15/22 12:50	12/15/22 15:40	4'
890-3665-12	PH08	Solid	12/15/22 12:55	12/15/22 15:40	1'
890-3665-13	PH08A	Solid	12/15/22 13:10	12/15/22 15:40	4'

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Chain of Custody

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

Work Order No: _____

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

Work Order Comments

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

Project Name:	PLU 18 TWR Sat Battery	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558144	Due Date:	
Project Location:	32.20635, -103.81299	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Meredith Roberts		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TMM-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.4
Total Containers:		Corrected Temperature:	1.2

Preservative Codes

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

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chlorides	BTEX	TPH	Sample Comments
PH01	S	12/15/22	1220	2'	G	1		X	X	X	Incident #:
PH01A			1230	4'							nAPP2230551957
PH02			1110	4'							
PH03			1330	4'							Cost Center:
PH04			0940	4'							2111031001
PH05			1010	3'							
PH05A			1015	4'							
PH06			1025	1'							
~~PH06A~~			~~1040~~	4'							
PH07			1235	1'							

890-3665 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					
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 11/10/2023 1:29:49 PM
Released to Imaging: 2/29/2024 4:12:50 PM
12/28/2022
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12/28/2022

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	13122 Nat'l Parks Hwy Ensolum, LLC	Company Name:	XTO Energy
Address:		Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337-257-8307	Email:	tmorrissey@ensolum.com

Work Order Comments

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

Project Name:	PLU 18 TWR Sat Battery	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558144	Due Date:	
Project Location:	32.20635, -103.81299	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Meredith Roberts		
PO #:			

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

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	Parameters: Chlorides	BTEX	TPH	Sample Comments
PH01A	S	12/15/22	1250	4'	G	1	X	X	X	Incident #: nAPP2230551957
PH08	↓	↓	1255	1'	↓	↓	↓	↓	↓	
PH08A	↓	↓	1310	4'	↓	↓	↓	↓	↓	Cost Center: 2111031001

MR

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.

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1	[signature]	Amanda Stutz	12/15/22 1540			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 11/10/2023 1:29:49 PM

Released to Imaging: 2/29/2024 4:12:50 PM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3665-1
SDG Number: 03E1558144

Login Number: 3665
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3665-1
SDG Number: 03E1558144

Login Number: 3665
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 12/19/22 09:10 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Ashley Giovengo
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 9/12/2023 3:44:53 PM

JOB DESCRIPTION

PLU 18 TWIN WELLS RANCH EAST SATELLITE
SDG NUMBER 03C1558144

JOB NUMBER

890-5202-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 2/29/2024 4:12:30 PM

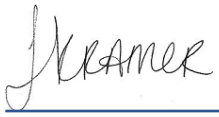
Eurofins Carlsbad

Job Notes

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

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

Authorization



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

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Laboratory Job ID: 890-5202-1
SDG: 03C1558144

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Eurofins Carlsbad
9/12/2023

Definitions/Glossary

Client: Ensolum Job ID: 890-5202-1
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE SDG: 03C1558144

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Job ID: 890-5202-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5202-1

Receipt
The samples were received on 9/5/2023 4:19 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.6°C

Receipt Exceptions
The following sampleswere received and analyzed from an unpreserved bulk soil jar: FS01 (890-5202-1), FS02 (890-5202-2), FS03 (890-5202-3), FS04 (890-5202-4), FS05 (890-5202-5), FS06 (890-5202-6), SW01 (890-5202-7), FS07 (890-5202-8), FS08 (890-5202-9), FS09 (890-5202-10), FS10 (890-5202-11) and SW02 (890-5202-12).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: FS01 (890-5202-1), FS02 (890-5202-2), FS04 (890-5202-4), FS05 (890-5202-5), FS06 (890-5202-6), SW01 (890-5202-7), FS07 (890-5202-8), FS08 (890-5202-9), FS09 (890-5202-10), FS10 (890-5202-11), SW02 (890-5202-12), (CCV 880-61966/2), (CCV 880-61966/20), (LCS 880-62000/1-A), (LCSD 880-62000/2-A), (880-32947-A-1-F), (880-32947-A-1-D MS) and (880-32947-A-1-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-61987 and analytical batch 880-61960 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-61960/20), (CCV 880-61960/31) and (CCV 880-61960/5). Evidence of matrix interferences is not obvious.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-61994 and analytical batch 880-62275 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: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Client Sample ID: FS01

Date Collected: 09/05/23 12:35
Date Received: 09/05/23 16:19
Sample Depth: 1

Lab Sample ID: 890-5202-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/07/23 15:14	09/07/23 22:06	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/07/23 15:14	09/07/23 22:06	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/07/23 15:14	09/07/23 22:06	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/07/23 15:14	09/07/23 22:06	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/07/23 15:14	09/07/23 22:06	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/07/23 15:14	09/07/23 22:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*186*	*S1+*	*70 - 130*	*09/07/23 15:14*	*09/07/23 22:06*	*1*
1,4-Difluorobenzene (Surr)	*73*		*70 - 130*	*09/07/23 15:14*	*09/07/23 22:06*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/08/23 09:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/08/23 11:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/07/23 11:01	09/07/23 14:29	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/07/23 11:01	09/07/23 14:29	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/07/23 11:01	09/07/23 14:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*135*	*S1+*	*70 - 130*	*09/07/23 11:01*	*09/07/23 14:29*	*1*
o-Terphenyl	*119*		*70 - 130*	*09/07/23 11:01*	*09/07/23 14:29*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**89.0**		4.96		mg/Kg			09/12/23 12:29	1

Client Sample ID: FS02

Date Collected: 09/05/23 12:40
Date Received: 09/05/23 16:19
Sample Depth: 1

Lab Sample ID: 890-5202-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/07/23 15:14	09/07/23 22:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/07/23 15:14	09/07/23 22:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/07/23 15:14	09/07/23 22:32	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/07/23 15:14	09/07/23 22:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/07/23 15:14	09/07/23 22:32	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/07/23 15:14	09/07/23 22:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*211*	*S1+*	*70 - 130*	*09/07/23 15:14*	*09/07/23 22:32*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Client Sample ID: FS02

Lab Sample ID: 890-5202-2
Matrix: Solid
Date Collected: 09/05/23 12:40
Date Received: 09/05/23 16:19
Sample Depth: 1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*09/07/23 15:14*	*09/07/23 22:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			09/08/23 09:09	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7	mg/Kg			09/08/23 11:36	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7	mg/Kg		09/07/23 11:01	09/07/23 14:51	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7	mg/Kg		09/07/23 11:01	09/07/23 14:51	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		09/07/23 11:01	09/07/23 14:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*128*		*70 - 130*	*09/07/23 11:01*	*09/07/23 14:51*	*1*
o-Terphenyl	*111*		*70 - 130*	*09/07/23 11:01*	*09/07/23 14:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**183**		4.97	mg/Kg			09/12/23 12:35	1

Client Sample ID: FS03

Lab Sample ID: 890-5202-3
Matrix: Solid
Date Collected: 09/05/23 12:45
Date Received: 09/05/23 16:19
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/07/23 15:14	09/07/23 22:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/07/23 15:14	09/07/23 22:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/07/23 15:14	09/07/23 22:58	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		09/07/23 15:14	09/07/23 22:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/07/23 15:14	09/07/23 22:58	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		09/07/23 15:14	09/07/23 22:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*09/07/23 15:14*	*09/07/23 22:58*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*09/07/23 15:14*	*09/07/23 22:58*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			09/08/23 09:09	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6	mg/Kg			09/08/23 11:36	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Client Sample ID: FS03

Date Collected: 09/05/23 12:45
Date Received: 09/05/23 16:19
Sample Depth: 1

Lab Sample ID: 890-5202-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		09/07/23 11:01	09/07/23 15:12	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		09/07/23 11:01	09/07/23 15:12	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		09/07/23 11:01	09/07/23 15:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*128*		*70 - 130*	*09/07/23 11:01*	*09/07/23 15:12*	*1*
o-Terphenyl	*112*		*70 - 130*	*09/07/23 11:01*	*09/07/23 15:12*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**105**	**F1**	5.01		mg/Kg			09/12/23 12:41	1

Client Sample ID: FS04

Date Collected: 09/05/23 12:50
Date Received: 09/05/23 16:19
Sample Depth: 1

Lab Sample ID: 890-5202-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/07/23 15:14	09/08/23 01:08	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/07/23 15:14	09/08/23 01:08	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/07/23 15:14	09/08/23 01:08	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		09/07/23 15:14	09/08/23 01:08	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/07/23 15:14	09/08/23 01:08	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		09/07/23 15:14	09/08/23 01:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*179*	*S1+*	*70 - 130*	*09/07/23 15:14*	*09/08/23 01:08*	*1*
1,4-Difluorobenzene (Surr)	*73*		*70 - 130*	*09/07/23 15:14*	*09/08/23 01:08*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			09/08/23 09:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			09/08/23 11:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		09/07/23 11:01	09/07/23 15:34	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		09/07/23 11:01	09/07/23 15:34	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		09/07/23 11:01	09/07/23 15:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*126*		*70 - 130*	*09/07/23 11:01*	*09/07/23 15:34*	*1*
o-Terphenyl	*107*		*70 - 130*	*09/07/23 11:01*	*09/07/23 15:34*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Client Sample ID: FS04

Lab Sample ID: 890-5202-4
Matrix: Solid
Date Collected: 09/05/23 12:50
Date Received: 09/05/23 16:19
Sample Depth: 1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	361		5.02		mg/Kg			09/12/23 13:00	1

Client Sample ID: FS05

Lab Sample ID: 890-5202-5
Matrix: Solid
Date Collected: 09/05/23 12:55
Date Received: 09/05/23 16:19
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/07/23 15:14	09/08/23 01:34	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/07/23 15:14	09/08/23 01:34	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/07/23 15:14	09/08/23 01:34	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		09/07/23 15:14	09/08/23 01:34	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/07/23 15:14	09/08/23 01:34	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		09/07/23 15:14	09/08/23 01:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*241*	*S1+*	*70 - 130*	*09/07/23 15:14*	*09/08/23 01:34*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*09/07/23 15:14*	*09/08/23 01:34*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			09/08/23 09:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			09/08/23 11:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		09/07/23 11:01	09/07/23 16:18	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		09/07/23 11:01	09/07/23 16:18	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		09/07/23 11:01	09/07/23 16:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*130*		*70 - 130*	*09/07/23 11:01*	*09/07/23 16:18*	*1*
o-Terphenyl	*113*		*70 - 130*	*09/07/23 11:01*	*09/07/23 16:18*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	752		4.99		mg/Kg			09/12/23 13:07	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Client Sample ID: FS06

Lab Sample ID: 890-5202-6
Matrix: Solid
Date Collected: 09/05/23 13:00
Date Received: 09/05/23 16:19
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/07/23 15:14	09/08/23 02:00	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/07/23 15:14	09/08/23 02:00	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/07/23 15:14	09/08/23 02:00	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/07/23 15:14	09/08/23 02:00	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/07/23 15:14	09/08/23 02:00	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/07/23 15:14	09/08/23 02:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*276*	*S1+*	*70 - 130*	*09/07/23 15:14*	*09/08/23 02:00*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*09/07/23 15:14*	*09/08/23 02:00*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			09/08/23 09:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			09/08/23 11:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		09/07/23 11:01	09/07/23 16:39	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		09/07/23 11:01	09/07/23 16:39	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		09/07/23 11:01	09/07/23 16:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*09/07/23 11:01*	*09/07/23 16:39*	*1*
o-Terphenyl	*104*		*70 - 130*	*09/07/23 11:01*	*09/07/23 16:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1080**		4.99		mg/Kg			09/12/23 13:26	1

Client Sample ID: SW01

Lab Sample ID: 890-5202-7
Matrix: Solid
Date Collected: 09/05/23 13:15
Date Received: 09/05/23 16:19
Sample Depth: 0.1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/07/23 15:14	09/08/23 02:26	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/07/23 15:14	09/08/23 02:26	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/07/23 15:14	09/08/23 02:26	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/07/23 15:14	09/08/23 02:26	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/07/23 15:14	09/08/23 02:26	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/07/23 15:14	09/08/23 02:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*207*	*S1+*	*70 - 130*	*09/07/23 15:14*	*09/08/23 02:26*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Client Sample ID: SW01

Lab Sample ID: 890-5202-7
Matrix: Solid
Date Collected: 09/05/23 13:15
Date Received: 09/05/23 16:19
Sample Depth: 0.1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*09/07/23 15:14*	*09/08/23 02:26*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/08/23 09:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/08/23 11:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/07/23 11:01	09/07/23 17:01	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/07/23 11:01	09/07/23 17:01	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/07/23 11:01	09/07/23 17:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*09/07/23 11:01*	*09/07/23 17:01*	*1*
o-Terphenyl	*106*		*70 - 130*	*09/07/23 11:01*	*09/07/23 17:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**89.9**		4.97		mg/Kg			09/12/23 13:32	1

Client Sample ID: FS07

Lab Sample ID: 890-5202-8
Matrix: Solid
Date Collected: 09/05/23 13:55
Date Received: 09/05/23 16:19
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/07/23 15:14	09/08/23 02:52	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/07/23 15:14	09/08/23 02:52	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/07/23 15:14	09/08/23 02:52	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/07/23 15:14	09/08/23 02:52	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/07/23 15:14	09/08/23 02:52	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/07/23 15:14	09/08/23 02:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*286*	*S1+*	*70 - 130*	*09/07/23 15:14*	*09/08/23 02:52*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*09/07/23 15:14*	*09/08/23 02:52*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/08/23 09:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/08/23 11:36	1

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Client Sample ID: FS07

Lab Sample ID: 890-5202-8
Matrix: Solid
Date Collected: 09/05/23 13:55
Date Received: 09/05/23 16:19
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/07/23 11:01	09/07/23 17:23	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/07/23 11:01	09/07/23 17:23	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/07/23 11:01	09/07/23 17:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*127*		*70 - 130*	*09/07/23 11:01*	*09/07/23 17:23*	*1*
o-Terphenyl	*110*		*70 - 130*	*09/07/23 11:01*	*09/07/23 17:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**100**		5.00		mg/Kg			09/12/23 13:39	1

Client Sample ID: FS08

Lab Sample ID: 890-5202-9
Matrix: Solid
Date Collected: 09/05/23 14:00
Date Received: 09/05/23 16:19
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/07/23 15:14	09/08/23 03:19	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/07/23 15:14	09/08/23 03:19	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/07/23 15:14	09/08/23 03:19	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		09/07/23 15:14	09/08/23 03:19	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/07/23 15:14	09/08/23 03:19	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		09/07/23 15:14	09/08/23 03:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*226*	*S1+*	*70 - 130*	*09/07/23 15:14*	*09/08/23 03:19*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*09/07/23 15:14*	*09/08/23 03:19*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			09/08/23 09:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			09/08/23 11:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		09/07/23 11:01	09/07/23 17:45	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		09/07/23 11:01	09/07/23 17:45	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		09/07/23 11:01	09/07/23 17:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*09/07/23 11:01*	*09/07/23 17:45*	*1*
o-Terphenyl	*106*		*70 - 130*	*09/07/23 11:01*	*09/07/23 17:45*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Client Sample ID: FS08

Lab Sample ID: 890-5202-9
Matrix: Solid
Date Collected: 09/05/23 14:00
Date Received: 09/05/23 16:19
Sample Depth: 1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	254		5.03		mg/Kg			09/12/23 13:45	1

Client Sample ID: FS09

Lab Sample ID: 890-5202-10
Matrix: Solid
Date Collected: 09/05/23 14:05
Date Received: 09/05/23 16:19
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/07/23 15:14	09/08/23 03:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/07/23 15:14	09/08/23 03:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/07/23 15:14	09/08/23 03:45	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/07/23 15:14	09/08/23 03:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/07/23 15:14	09/08/23 03:45	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/07/23 15:14	09/08/23 03:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*246*	*S1+*	*70 - 130*	*09/07/23 15:14*	*09/08/23 03:45*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*09/07/23 15:14*	*09/08/23 03:45*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/08/23 09:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			09/08/23 11:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		09/07/23 11:01	09/07/23 18:06	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		09/07/23 11:01	09/07/23 18:06	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		09/07/23 11:01	09/07/23 18:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*09/07/23 11:01*	*09/07/23 18:06*	*1*
o-Terphenyl	*100*		*70 - 130*	*09/07/23 11:01*	*09/07/23 18:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	307		5.01		mg/Kg			09/12/23 13:52	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Client Sample ID: FS10

Lab Sample ID: 890-5202-11
Matrix: Solid
Date Collected: 09/05/23 14:10
Date Received: 09/05/23 16:19
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/07/23 15:14	09/08/23 04:11	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/07/23 15:14	09/08/23 04:11	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/07/23 15:14	09/08/23 04:11	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		09/07/23 15:14	09/08/23 04:11	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/07/23 15:14	09/08/23 04:11	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		09/07/23 15:14	09/08/23 04:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*266*	*S1+*	*70 - 130*	*09/07/23 15:14*	*09/08/23 04:11*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*09/07/23 15:14*	*09/08/23 04:11*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			09/08/23 09:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			09/08/23 11:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		09/07/23 11:01	09/07/23 18:28	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		09/07/23 11:01	09/07/23 18:28	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		09/07/23 11:01	09/07/23 18:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*09/07/23 11:01*	*09/07/23 18:28*	*1*
o-Terphenyl	*107*		*70 - 130*	*09/07/23 11:01*	*09/07/23 18:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**266**		5.02		mg/Kg			09/12/23 13:58	1

Client Sample ID: SW02

Lab Sample ID: 890-5202-12
Matrix: Solid
Date Collected: 09/05/23 14:15
Date Received: 09/05/23 16:19
Sample Depth: 0.1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/07/23 15:14	09/08/23 04:37	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/07/23 15:14	09/08/23 04:37	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/07/23 15:14	09/08/23 04:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/07/23 15:14	09/08/23 04:37	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/07/23 15:14	09/08/23 04:37	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/07/23 15:14	09/08/23 04:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*205*	*S1+*	*70 - 130*	*09/07/23 15:14*	*09/08/23 04:37*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Client Sample ID: SW02
Date Collected: 09/05/23 14:15
Date Received: 09/05/23 16:19
Sample Depth: 0.1

Lab Sample ID: 890-5202-12
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*09/07/23 15:14*	*09/08/23 04:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/08/23 09:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			09/08/23 11:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		09/07/23 11:01	09/07/23 18:50	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		09/07/23 11:01	09/07/23 18:50	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		09/07/23 11:01	09/07/23 18:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*117*		*70 - 130*	*09/07/23 11:01*	*09/07/23 18:50*	*1*
o-Terphenyl	*100*		*70 - 130*	*09/07/23 11:01*	*09/07/23 18:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**247**		4.97		mg/Kg			09/12/23 14:04	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-32947-A-1-D MS	Matrix Spike	210 S1+	74
880-32947-A-1-E MSD	Matrix Spike Duplicate	203 S1+	89
890-5202-1	FS01	186 S1+	73
890-5202-2	FS02	211 S1+	80
890-5202-3	FS03	102	82
890-5202-4	FS04	179 S1+	73
890-5202-5	FS05	241 S1+	77
890-5202-6	FS06	276 S1+	75
890-5202-7	SW01	207 S1+	76
890-5202-8	FS07	286 S1+	94
890-5202-9	FS08	226 S1+	77
890-5202-10	FS09	246 S1+	81
890-5202-11	FS10	266 S1+	75
890-5202-12	SW02	205 S1+	76
LCS 880-62000/1-A	Lab Control Sample	189 S1+	87
LCSD 880-62000/2-A	Lab Control Sample Dup	190 S1+	72
MB 880-62000/5-A	Method Blank	122	72

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-5201-A-1-B MS	Matrix Spike	120	90
890-5201-A-1-C MSD	Matrix Spike Duplicate	118	89
890-5202-1	FS01	135 S1+	119
890-5202-2	FS02	128	111
890-5202-3	FS03	128	112
890-5202-4	FS04	126	107
890-5202-5	FS05	130	113
890-5202-6	FS06	122	104
890-5202-7	SW01	122	106
890-5202-8	FS07	127	110
890-5202-9	FS08	122	106
890-5202-10	FS09	118	100
890-5202-11	FS10	124	107
890-5202-12	SW02	117	100
LCS 880-61987/2-A	Lab Control Sample	112	113
LCSD 880-61987/3-A	Lab Control Sample Dup	123	116
MB 880-61987/1-A	Method Blank	179 S1+	157 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-62000/5-A
Matrix: Solid
Analysis Batch: 61966

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62000

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/07/23 15:14	09/07/23 19:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/07/23 15:14	09/07/23 19:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/07/23 15:14	09/07/23 19:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/07/23 15:14	09/07/23 19:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/07/23 15:14	09/07/23 19:06	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/07/23 15:14	09/07/23 19:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*09/07/23 15:14*	*09/07/23 19:06*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*09/07/23 15:14*	*09/07/23 19:06*	*1*

Lab Sample ID: LCS 880-62000/1-A
Matrix: Solid
Analysis Batch: 61966

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62000

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09683		mg/Kg		97	70 - 130		
Toluene			0.100	0.1006		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.08425		mg/Kg		84	70 - 130		
m-Xylene & p-Xylene			0.200	0.1941		mg/Kg		97	70 - 130		
o-Xylene			0.100	0.09578		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*189*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

Lab Sample ID: LCSD 880-62000/2-A
Matrix: Solid
Analysis Batch: 61966

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62000

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1002		mg/Kg		100	70 - 130	3	35
Toluene			0.100	0.1069		mg/Kg		107	70 - 130	6	35
Ethylbenzene			0.100	0.09463		mg/Kg		95	70 - 130	12	35
m-Xylene & p-Xylene			0.200	0.2154		mg/Kg		108	70 - 130	10	35
o-Xylene			0.100	0.1073		mg/Kg		107	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*190*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*

Lab Sample ID: 880-32947-A-1-D MS
Matrix: Solid
Analysis Batch: 61966

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62000

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00198	U	0.0996	0.09263		mg/Kg		93	70 - 130		
Toluene	<0.00198	U	0.0996	0.1010		mg/Kg		101	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

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

Lab Sample ID: 880-32947-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61966 — **Prep Batch: 62000**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00198	U	0.0996	0.08033		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	<0.00396	U	0.199	0.1832		mg/Kg		92	70 - 130
o-Xylene	<0.00198	U	0.0996	0.08686		mg/Kg		87	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*210*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*

Lab Sample ID: 880-32947-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61966 — **Prep Batch: 62000**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.100	0.09868		mg/Kg		98	70 - 130	6	35
Toluene	<0.00198	U	0.100	0.1024		mg/Kg		102	70 - 130	1	35
Ethylbenzene	<0.00198	U	0.100	0.08407		mg/Kg		84	70 - 130	5	35
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1938		mg/Kg		97	70 - 130	6	35
o-Xylene	<0.00198	U	0.100	0.09394		mg/Kg		94	70 - 130	8	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*203*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

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

Lab Sample ID: MB 880-61987/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61960 — **Prep Batch: 61987**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/07/23 08:00	09/07/23 08:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/07/23 08:00	09/07/23 08:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/07/23 08:00	09/07/23 08:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*179*	*S1+*	*70 - 130*	*09/07/23 08:00*	*09/07/23 08:29*	*1*
o-Terphenyl	*157*	*S1+*	*70 - 130*	*09/07/23 08:00*	*09/07/23 08:29*	*1*

Lab Sample ID: LCS 880-61987/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61960 — **Prep Batch: 61987**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	953.8		mg/Kg		95	70 - 130
Diesel Range Organics (Over C10-C28)	1000	951.1		mg/Kg		95	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

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

Lab Sample ID: LCS 880-61987/2-A
Matrix: Solid
Analysis Batch: 61960

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61987

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	112		70 - 130
o-Terphenyl	113		70 - 130

Lab Sample ID: LCSD 880-61987/3-A
Matrix: Solid
Analysis Batch: 61960

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61987

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	978.1		mg/Kg		98	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	965.3		mg/Kg		97	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	123		70 - 130
o-Terphenyl	116		70 - 130

Lab Sample ID: 890-5201-A-1-B MS
Matrix: Solid
Analysis Batch: 61960

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 61987

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	1010	908.8		mg/Kg		86	70 - 130
Diesel Range Organics (Over C10-C28)	58.8		1010	1172		mg/Kg		110	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	120		70 - 130
o-Terphenyl	90		70 - 130

Lab Sample ID: 890-5201-A-1-C MSD
Matrix: Solid
Analysis Batch: 61960

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 61987

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	1010	914.8		mg/Kg		86	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	58.8		1010	1136		mg/Kg		107	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	118		70 - 130
o-Terphenyl	89		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-61994/1-A
Matrix: Solid
Analysis Batch: 62275

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/12/23 10:53	1

Lab Sample ID: LCS 880-61994/2-A
Matrix: Solid
Analysis Batch: 62275

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	249.5		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-61994/3-A
Matrix: Solid
Analysis Batch: 62275

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	250.0		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 890-5202-3 MS
Matrix: Solid
Analysis Batch: 62275

Client Sample ID: FS03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	105	F1	251	395.8	F1	mg/Kg		116	90 - 110		

Lab Sample ID: 890-5202-3 MSD
Matrix: Solid
Analysis Batch: 62275

Client Sample ID: FS03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	105	F1	251	395.3	F1	mg/Kg		116	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

GC VOA

Analysis Batch: 61966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5202-1	FS01	Total/NA	Solid	8021B	62000
890-5202-2	FS02	Total/NA	Solid	8021B	62000
890-5202-3	FS03	Total/NA	Solid	8021B	62000
890-5202-4	FS04	Total/NA	Solid	8021B	62000
890-5202-5	FS05	Total/NA	Solid	8021B	62000
890-5202-6	FS06	Total/NA	Solid	8021B	62000
890-5202-7	SW01	Total/NA	Solid	8021B	62000
890-5202-8	FS07	Total/NA	Solid	8021B	62000
890-5202-9	FS08	Total/NA	Solid	8021B	62000
890-5202-10	FS09	Total/NA	Solid	8021B	62000
890-5202-11	FS10	Total/NA	Solid	8021B	62000
890-5202-12	SW02	Total/NA	Solid	8021B	62000
MB 880-62000/5-A	Method Blank	Total/NA	Solid	8021B	62000
LCS 880-62000/1-A	Lab Control Sample	Total/NA	Solid	8021B	62000
LCSD 880-62000/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	62000
880-32947-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	62000
880-32947-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	62000

Prep Batch: 62000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5202-1	FS01	Total/NA	Solid	5035	
890-5202-2	FS02	Total/NA	Solid	5035	
890-5202-3	FS03	Total/NA	Solid	5035	
890-5202-4	FS04	Total/NA	Solid	5035	
890-5202-5	FS05	Total/NA	Solid	5035	
890-5202-6	FS06	Total/NA	Solid	5035	
890-5202-7	SW01	Total/NA	Solid	5035	
890-5202-8	FS07	Total/NA	Solid	5035	
890-5202-9	FS08	Total/NA	Solid	5035	
890-5202-10	FS09	Total/NA	Solid	5035	
890-5202-11	FS10	Total/NA	Solid	5035	
890-5202-12	SW02	Total/NA	Solid	5035	
MB 880-62000/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-62000/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-62000/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-32947-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-32947-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 62053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5202-1	FS01	Total/NA	Solid	Total BTEX	
890-5202-2	FS02	Total/NA	Solid	Total BTEX	
890-5202-3	FS03	Total/NA	Solid	Total BTEX	
890-5202-4	FS04	Total/NA	Solid	Total BTEX	
890-5202-5	FS05	Total/NA	Solid	Total BTEX	
890-5202-6	FS06	Total/NA	Solid	Total BTEX	
890-5202-7	SW01	Total/NA	Solid	Total BTEX	
890-5202-8	FS07	Total/NA	Solid	Total BTEX	
890-5202-9	FS08	Total/NA	Solid	Total BTEX	
890-5202-10	FS09	Total/NA	Solid	Total BTEX	
890-5202-11	FS10	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

GC VOA (Continued)

Analysis Batch: 62053 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5202-12	SW02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 61960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5202-1	FS01	Total/NA	Solid	8015B NM	61987
890-5202-2	FS02	Total/NA	Solid	8015B NM	61987
890-5202-3	FS03	Total/NA	Solid	8015B NM	61987
890-5202-4	FS04	Total/NA	Solid	8015B NM	61987
890-5202-5	FS05	Total/NA	Solid	8015B NM	61987
890-5202-6	FS06	Total/NA	Solid	8015B NM	61987
890-5202-7	SW01	Total/NA	Solid	8015B NM	61987
890-5202-8	FS07	Total/NA	Solid	8015B NM	61987
890-5202-9	FS08	Total/NA	Solid	8015B NM	61987
890-5202-10	FS09	Total/NA	Solid	8015B NM	61987
890-5202-11	FS10	Total/NA	Solid	8015B NM	61987
890-5202-12	SW02	Total/NA	Solid	8015B NM	61987
MB 880-61987/1-A	Method Blank	Total/NA	Solid	8015B NM	61987
LCS 880-61987/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	61987
LCSD 880-61987/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	61987
890-5201-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	61987
890-5201-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	61987

Prep Batch: 61987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5202-1	FS01	Total/NA	Solid	8015NM Prep	
890-5202-2	FS02	Total/NA	Solid	8015NM Prep	
890-5202-3	FS03	Total/NA	Solid	8015NM Prep	
890-5202-4	FS04	Total/NA	Solid	8015NM Prep	
890-5202-5	FS05	Total/NA	Solid	8015NM Prep	
890-5202-6	FS06	Total/NA	Solid	8015NM Prep	
890-5202-7	SW01	Total/NA	Solid	8015NM Prep	
890-5202-8	FS07	Total/NA	Solid	8015NM Prep	
890-5202-9	FS08	Total/NA	Solid	8015NM Prep	
890-5202-10	FS09	Total/NA	Solid	8015NM Prep	
890-5202-11	FS10	Total/NA	Solid	8015NM Prep	
890-5202-12	SW02	Total/NA	Solid	8015NM Prep	
MB 880-61987/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-61987/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-61987/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5201-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5201-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 62086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5202-1	FS01	Total/NA	Solid	8015 NM	
890-5202-2	FS02	Total/NA	Solid	8015 NM	
890-5202-3	FS03	Total/NA	Solid	8015 NM	
890-5202-4	FS04	Total/NA	Solid	8015 NM	
890-5202-5	FS05	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

GC Semi VOA (Continued)

Analysis Batch: 62086 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5202-6	FS06	Total/NA	Solid	8015 NM	
890-5202-7	SW01	Total/NA	Solid	8015 NM	
890-5202-8	FS07	Total/NA	Solid	8015 NM	
890-5202-9	FS08	Total/NA	Solid	8015 NM	
890-5202-10	FS09	Total/NA	Solid	8015 NM	
890-5202-11	FS10	Total/NA	Solid	8015 NM	
890-5202-12	SW02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 61994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5202-1	FS01	Soluble	Solid	DI Leach	
890-5202-2	FS02	Soluble	Solid	DI Leach	
890-5202-3	FS03	Soluble	Solid	DI Leach	
890-5202-4	FS04	Soluble	Solid	DI Leach	
890-5202-5	FS05	Soluble	Solid	DI Leach	
890-5202-6	FS06	Soluble	Solid	DI Leach	
890-5202-7	SW01	Soluble	Solid	DI Leach	
890-5202-8	FS07	Soluble	Solid	DI Leach	
890-5202-9	FS08	Soluble	Solid	DI Leach	
890-5202-10	FS09	Soluble	Solid	DI Leach	
890-5202-11	FS10	Soluble	Solid	DI Leach	
890-5202-12	SW02	Soluble	Solid	DI Leach	
MB 880-61994/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-61994/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-61994/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5202-3 MS	FS03	Soluble	Solid	DI Leach	
890-5202-3 MSD	FS03	Soluble	Solid	DI Leach	

Analysis Batch: 62275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5202-1	FS01	Soluble	Solid	300.0	61994
890-5202-2	FS02	Soluble	Solid	300.0	61994
890-5202-3	FS03	Soluble	Solid	300.0	61994
890-5202-4	FS04	Soluble	Solid	300.0	61994
890-5202-5	FS05	Soluble	Solid	300.0	61994
890-5202-6	FS06	Soluble	Solid	300.0	61994
890-5202-7	SW01	Soluble	Solid	300.0	61994
890-5202-8	FS07	Soluble	Solid	300.0	61994
890-5202-9	FS08	Soluble	Solid	300.0	61994
890-5202-10	FS09	Soluble	Solid	300.0	61994
890-5202-11	FS10	Soluble	Solid	300.0	61994
890-5202-12	SW02	Soluble	Solid	300.0	61994
MB 880-61994/1-A	Method Blank	Soluble	Solid	300.0	61994
LCS 880-61994/2-A	Lab Control Sample	Soluble	Solid	300.0	61994
LCSD 880-61994/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	61994
890-5202-3 MS	FS03	Soluble	Solid	300.0	61994
890-5202-3 MSD	FS03	Soluble	Solid	300.0	61994

Lab Chronicle

Client: Ensolum
Job ID: 890-5202-1
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE
SDG: 03C1558144

Client Sample ID: FS01
Lab Sample ID: 890-5202-1
Date Collected: 09/05/23 12:35
Matrix: Solid
Date Received: 09/05/23 16:19

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	62000	09/07/23 15:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61966	09/07/23 22:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62053	09/08/23 09:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			62086	09/08/23 11:36	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	61987	09/07/23 11:01	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61960	09/07/23 14:29	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	61994	09/07/23 11:17	CH	EET MID
Soluble	Analysis	300.0		1			62275	09/12/23 12:29	CH	EET MID

Client Sample ID: FS02
Lab Sample ID: 890-5202-2
Date Collected: 09/05/23 12:40
Matrix: Solid
Date Received: 09/05/23 16:19

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	62000	09/07/23 15:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61966	09/07/23 22:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62053	09/08/23 09:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			62086	09/08/23 11:36	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	61987	09/07/23 11:01	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61960	09/07/23 14:51	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	61994	09/07/23 11:17	CH	EET MID
Soluble	Analysis	300.0		1			62275	09/12/23 12:35	CH	EET MID

Client Sample ID: FS03
Lab Sample ID: 890-5202-3
Date Collected: 09/05/23 12:45
Matrix: Solid
Date Received: 09/05/23 16:19

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	62000	09/07/23 15:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61966	09/07/23 22:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62053	09/08/23 09:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			62086	09/08/23 11:36	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	61987	09/07/23 11:01	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61960	09/07/23 15:12	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	61994	09/07/23 11:17	CH	EET MID
Soluble	Analysis	300.0		1			62275	09/12/23 12:41	CH	EET MID

Client Sample ID: FS04
Lab Sample ID: 890-5202-4
Date Collected: 09/05/23 12:50
Matrix: Solid
Date Received: 09/05/23 16:19

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	62000	09/07/23 15:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61966	09/08/23 01:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62053	09/08/23 09:09	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Client Sample ID: FS04
Date Collected: 09/05/23 12:50
Date Received: 09/05/23 16:19

Lab Sample ID: 890-5202-4
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			62086	09/08/23 11:36	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	61987	09/07/23 11:01	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61960	09/07/23 15:34	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	61994	09/07/23 11:17	CH	EET MID
Soluble	Analysis	300.0		1			62275	09/12/23 13:00	CH	EET MID

Client Sample ID: FS05
Date Collected: 09/05/23 12:55
Date Received: 09/05/23 16:19

Lab Sample ID: 890-5202-5
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			4.95 g	5 mL	62000	09/07/23 15:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61966	09/08/23 01:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62053	09/08/23 09:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			62086	09/08/23 11:36	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	61987	09/07/23 11:01	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61960	09/07/23 16:18	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	61994	09/07/23 11:17	CH	EET MID
Soluble	Analysis	300.0		1			62275	09/12/23 13:07	CH	EET MID

Client Sample ID: FS06
Date Collected: 09/05/23 13:00
Date Received: 09/05/23 16:19

Lab Sample ID: 890-5202-6
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	62000	09/07/23 15:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61966	09/08/23 02:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62053	09/08/23 09:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			62086	09/08/23 11:36	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	61987	09/07/23 11:01	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61960	09/07/23 16:39	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	61994	09/07/23 11:17	CH	EET MID
Soluble	Analysis	300.0		1			62275	09/12/23 13:26	CH	EET MID

Client Sample ID: SW01
Date Collected: 09/05/23 13:15
Date Received: 09/05/23 16:19

Lab Sample ID: 890-5202-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	62000	09/07/23 15:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61966	09/08/23 02:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62053	09/08/23 09:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			62086	09/08/23 11:36	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	61987	09/07/23 11:01	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61960	09/07/23 17:01	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Client Sample ID: SW01
Date Collected: 09/05/23 13:15
Date Received: 09/05/23 16:19

Lab Sample ID: 890-5202-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	61994	09/07/23 11:17	CH	EET MID
Soluble	Analysis	300.0		1			62275	09/12/23 13:32	CH	EET MID

Client Sample ID: FS07
Date Collected: 09/05/23 13:55
Date Received: 09/05/23 16:19

Lab Sample ID: 890-5202-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	62000	09/07/23 15:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61966	09/08/23 02:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62053	09/08/23 09:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			62086	09/08/23 11:36	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	61987	09/07/23 11:01	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61960	09/07/23 17:23	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	61994	09/07/23 11:17	CH	EET MID
Soluble	Analysis	300.0		1			62275	09/12/23 13:39	CH	EET MID

Client Sample ID: FS08
Date Collected: 09/05/23 14:00
Date Received: 09/05/23 16:19

Lab Sample ID: 890-5202-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	62000	09/07/23 15:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61966	09/08/23 03:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62053	09/08/23 09:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			62086	09/08/23 11:36	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	61987	09/07/23 11:01	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61960	09/07/23 17:45	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	61994	09/07/23 11:17	CH	EET MID
Soluble	Analysis	300.0		1			62275	09/12/23 13:45	CH	EET MID

Client Sample ID: FS09
Date Collected: 09/05/23 14:05
Date Received: 09/05/23 16:19

Lab Sample ID: 890-5202-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	62000	09/07/23 15:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61966	09/08/23 03:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62053	09/08/23 09:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			62086	09/08/23 11:36	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	61987	09/07/23 11:01	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61960	09/07/23 18:06	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	61994	09/07/23 11:17	CH	EET MID
Soluble	Analysis	300.0		1			62275	09/12/23 13:52	CH	EET MID

Lab Chronicle

Client: Ensolum
Job ID: 890-5202-1
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE
SDG: 03C1558144

Client Sample ID: FS10
Lab Sample ID: 890-5202-11
Date Collected: 09/05/23 14:10
Matrix: Solid
Date Received: 09/05/23 16:19

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	62000	09/07/23 15:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61966	09/08/23 04:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62053	09/08/23 09:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			62086	09/08/23 11:36	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	61987	09/07/23 11:01	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61960	09/07/23 18:28	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	61994	09/07/23 11:17	CH	EET MID
Soluble	Analysis	300.0		1			62275	09/12/23 13:58	CH	EET MID

Client Sample ID: SW02
Lab Sample ID: 890-5202-12
Date Collected: 09/05/23 14:15
Matrix: Solid
Date Received: 09/05/23 16:19

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	62000	09/07/23 15:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61966	09/08/23 04:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62053	09/08/23 09:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			62086	09/08/23 11:36	SM	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	61987	09/07/23 11:01	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61960	09/07/23 18:50	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	61994	09/07/23 11:17	CH	EET MID
Soluble	Analysis	300.0		1			62275	09/12/23 14:04	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: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Ensolum Job ID: 890-5202-1
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE SDG: 03C1558144

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5202-1
SDG: 03C1558144

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5202-1	FS01	Solid	09/05/23 12:35	09/05/23 16:19	1
890-5202-2	FS02	Solid	09/05/23 12:40	09/05/23 16:19	1
890-5202-3	FS03	Solid	09/05/23 12:45	09/05/23 16:19	1
890-5202-4	FS04	Solid	09/05/23 12:50	09/05/23 16:19	1
890-5202-5	FS05	Solid	09/05/23 12:55	09/05/23 16:19	0.5
890-5202-6	FS06	Solid	09/05/23 13:00	09/05/23 16:19	0.5
890-5202-7	SW01	Solid	09/05/23 13:15	09/05/23 16:19	0.1
890-5202-8	FS07	Solid	09/05/23 13:55	09/05/23 16:19	1
890-5202-9	FS08	Solid	09/05/23 14:00	09/05/23 16:19	1
890-5202-10	FS09	Solid	09/05/23 14:05	09/05/23 16:19	1
890-5202-11	FS10	Solid	09/05/23 14:10	09/05/23 16:19	1
890-5202-12	SW02	Solid	09/05/23 14:15	09/05/23 16:19	0.1

Released to Imaging: 2/29/2024 4:12:50 PM
Received by OCD: 11/10/2023 1:29:49 PM

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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 2

Project Manager:	Ashley Giovengo	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	575-988-0055	Email:	Garrett.Green@ExxonMobil.com

Work Order Comments

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

Project Name:	PLU 18 Twin Wells Ranch East Satellite	Turn Around	
Project Number:	03C1558144	☒ Routine ☐ Rush	
Project Location:	32.20035, -103.81299	Due Date:	5 days
Sampler's Name:	Mariaha O'Dell	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM 007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	3.8
Total Containers:		Corrected Temperature:	3.6

Preservative Codes

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

890-5202 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chlorides	BTEX	TPH
FS01	S	9/5/23	12:35	1'	C	1		X	X	X
FS02			12:40	1'						
FS03			12:45	1'						
FS04			12:50	1'						
FS05			12:55	0.5'						
FS06			13:00	0.5'						
SW01			13:15	0-1'						
FS07			13:55	1'						
FS08			14:00	1'						
FS09			14:05	1'						

Sample Comments

Incident #: NAPP2230551957
Cost center: 2111031001
~~Ben Belill~~: no
Ashley Giovengo: agiovengo@ensolum.com
Ben Belill: bbelill@ensolum.com

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			9-5-23 16:09			
3				4		
5				6		

Revised Date 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5202-1
SDG Number: 03C1558144

Login Number: 5202
List Number: 1
Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5202-1
SDG Number: 03C1558144

Login Number: 5202
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/07/23 10:51 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 9/18/2023 12:44:23 PM

JOB DESCRIPTION

PLU 18 TWIN WELLS RANCH EAST SATELLITE
SDG NUMBER 03C1558144

JOB NUMBER

890-5224-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 2/29/2024 4:12:30 PM

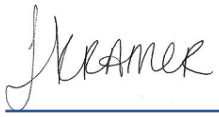
Eurofins Carlsbad

Job Notes

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

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

Authorization



Generated
9/18/2023 12:44:23 PM

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

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Laboratory Job ID: 890-5224-1
SDG: 03C1558144

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Eurofins Carlsbad
9/18/2023

Definitions/Glossary

Client: Ensolum Job ID: 890-5224-1
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE SDG: 03C1558144

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Job ID: 890-5224-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5224-1

Receipt
The samples were received on 9/8/2023 8:46 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 3.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS11 (890-5224-1), FS12 (890-5224-2), FS13 (890-5224-3), FS14 (890-5224-4), SW03 (890-5224-5), FS15 (890-5224-6), FS16 (890-5224-7), FS17 (890-5224-8), FS18 (890-5224-9), FS19 (890-5224-10), FS20 (890-5224-11), FS21 (890-5224-12) and SW04 (890-5224-13).

The following samples were received and analyzed from an unpreserved bulk soil jar: FS11 (890-5224-1), FS12 (890-5224-2), FS13 (890-5224-3), FS14 (890-5224-4), SW03 (890-5224-5), FS15 (890-5224-6), FS16 (890-5224-7), FS17 (890-5224-8), FS18 (890-5224-9), FS19 (890-5224-10), FS20 (890-5224-11), FS21 (890-5224-12) and SW04 (890-5224-13).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: FS11 (890-5224-1), FS14 (890-5224-4), FS16 (890-5224-7), FS19 (890-5224-10) and (880-33088-A-1-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-62129 and analytical batch 880-62238 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (MB 880-62273/5-A), (890-5231-A-1-C), (890-5231-A-1-A MS) and (890-5231-A-1-B MSD). Evidence of matrix interferences is not obvious.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-62273 and analytical batch 880-62237 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-62237 recovered below the lower control limit for o-Xylene. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-62237/50).

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: FS15 (890-5224-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-62116/20) and (CCV 880-62116/5). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS16 (890-5224-7) and FS18 (890-5224-9). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-5224-A-11-D MS) and (890-5224-A-11-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-62229/20) and (CCV 880-62229/5). Evidence of matrix interferences is not obvious.

Case Narrative

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Job ID: 890-5224-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

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

HPLC/IC

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Client Sample ID: FS11

Lab Sample ID: 890-5224-1
Matrix: Solid
Date Collected: 09/07/23 10:20
Date Received: 09/08/23 08:46
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 14:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 14:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 14:26	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/11/23 09:25	09/12/23 14:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 14:26	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/11/23 09:25	09/12/23 14:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*62*	*S1-*	*70 - 130*	*09/11/23 09:25*	*09/12/23 14:26*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*09/11/23 09:25*	*09/12/23 14:26*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			09/12/23 17:29	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			09/11/23 18:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		09/11/23 10:05	09/11/23 15:52	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		09/11/23 10:05	09/11/23 15:52	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		09/11/23 10:05	09/11/23 15:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*128*		*70 - 130*	*09/11/23 10:05*	*09/11/23 15:52*	*1*
o-Terphenyl	*115*		*70 - 130*	*09/11/23 10:05*	*09/11/23 15:52*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**403**		5.02		mg/Kg			09/13/23 14:20	1

Client Sample ID: FS12

Lab Sample ID: 890-5224-2
Matrix: Solid
Date Collected: 09/07/23 10:25
Date Received: 09/08/23 08:46
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 16:31	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 16:31	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 16:31	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/11/23 09:25	09/12/23 16:31	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 16:31	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/11/23 09:25	09/12/23 16:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*09/11/23 09:25*	*09/12/23 16:31*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Client Sample ID: FS12

Date Collected: 09/07/23 10:25
Date Received: 09/08/23 08:46
Sample Depth: 1

Lab Sample ID: 890-5224-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*09/11/23 09:25*	*09/12/23 16:31*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			09/12/23 17:29	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1	mg/Kg			09/11/23 18:07	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1	mg/Kg		09/11/23 10:05	09/11/23 16:14	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1	mg/Kg		09/11/23 10:05	09/11/23 16:14	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		09/11/23 10:05	09/11/23 16:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*09/11/23 10:05*	*09/11/23 16:14*	*1*
o-Terphenyl	*109*		*70 - 130*	*09/11/23 10:05*	*09/11/23 16:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**485**		5.05	mg/Kg			09/13/23 14:26	1

Client Sample ID: FS13

Date Collected: 09/07/23 11:00
Date Received: 09/08/23 08:46
Sample Depth: 1

Lab Sample ID: 890-5224-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/11/23 09:25	09/12/23 16:52	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/11/23 09:25	09/12/23 16:52	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		09/11/23 09:25	09/12/23 16:52	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/11/23 09:25	09/12/23 16:52	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		09/11/23 09:25	09/12/23 16:52	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/11/23 09:25	09/12/23 16:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*73*		*70 - 130*	*09/11/23 09:25*	*09/12/23 16:52*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*09/11/23 09:25*	*09/12/23 16:52*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7	mg/Kg			09/11/23 18:07	1

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Client Sample ID: FS13

Date Collected: 09/07/23 11:00
Date Received: 09/08/23 08:46
Sample Depth: 1

Lab Sample ID: 890-5224-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		09/11/23 10:05	09/11/23 16:36	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		09/11/23 10:05	09/11/23 16:36	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		09/11/23 10:05	09/11/23 16:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*09/11/23 10:05*	*09/11/23 16:36*	*1*
o-Terphenyl	*100*		*70 - 130*	*09/11/23 10:05*	*09/11/23 16:36*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**489**		5.03		mg/Kg			09/14/23 04:40	1

Client Sample ID: FS14

Date Collected: 09/07/23 11:05
Date Received: 09/08/23 08:46
Sample Depth: 1

Lab Sample ID: 890-5224-4

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/11/23 09:25	09/12/23 17:12	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/11/23 09:25	09/12/23 17:12	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/11/23 09:25	09/12/23 17:12	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		09/11/23 09:25	09/12/23 17:12	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/11/23 09:25	09/12/23 17:12	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		09/11/23 09:25	09/12/23 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*09/11/23 09:25*	*09/12/23 17:12*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*09/11/23 09:25*	*09/12/23 17:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/11/23 18:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/11/23 10:05	09/11/23 16:58	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/11/23 10:05	09/11/23 16:58	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/11/23 10:05	09/11/23 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*09/11/23 10:05*	*09/11/23 16:58*	*1*
o-Terphenyl	*107*		*70 - 130*	*09/11/23 10:05*	*09/11/23 16:58*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Client Sample ID: FS14

Lab Sample ID: 890-5224-4
Matrix: Solid
Date Collected: 09/07/23 11:05
Date Received: 09/08/23 08:46
Sample Depth: 1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	380		5.05		mg/Kg			09/14/23 04:47	1

Client Sample ID: SW03

Lab Sample ID: 890-5224-5
Matrix: Solid
Date Collected: 09/07/23 12:50
Date Received: 09/08/23 08:46
Sample Depth: 0-1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/11/23 09:25	09/12/23 17:33	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/11/23 09:25	09/12/23 17:33	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/11/23 09:25	09/12/23 17:33	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		09/11/23 09:25	09/12/23 17:33	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/11/23 09:25	09/12/23 17:33	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		09/11/23 09:25	09/12/23 17:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*09/11/23 09:25*	*09/12/23 17:33*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*09/11/23 09:25*	*09/12/23 17:33*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			09/11/23 18:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		09/11/23 10:05	09/11/23 17:20	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		09/11/23 10:05	09/11/23 17:20	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		09/11/23 10:05	09/11/23 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*09/11/23 10:05*	*09/11/23 17:20*	*1*
o-Terphenyl	*93*		*70 - 130*	*09/11/23 10:05*	*09/11/23 17:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	463		5.02		mg/Kg			09/14/23 04:53	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Client Sample ID: FS15

Date Collected: 09/07/23 13:10
Date Received: 09/08/23 08:46
Sample Depth: 1

Lab Sample ID: 890-5224-6
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/11/23 09:25	09/12/23 17:53	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/11/23 09:25	09/12/23 17:53	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/11/23 09:25	09/12/23 17:53	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/11/23 09:25	09/12/23 17:53	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/11/23 09:25	09/12/23 17:53	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/11/23 09:25	09/12/23 17:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*09/11/23 09:25*	*09/12/23 17:53*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*09/11/23 09:25*	*09/12/23 17:53*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/11/23 18:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/11/23 10:05	09/11/23 17:43	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/11/23 10:05	09/11/23 17:43	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/11/23 10:05	09/11/23 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*142*	*S1+*	*70 - 130*	*09/11/23 10:05*	*09/11/23 17:43*	*1*
o-Terphenyl	*123*		*70 - 130*	*09/11/23 10:05*	*09/11/23 17:43*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**330**		4.95		mg/Kg			09/14/23 05:00	1

Client Sample ID: FS16

Date Collected: 09/07/23 13:15
Date Received: 09/08/23 08:46
Sample Depth: 1

Lab Sample ID: 890-5224-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/11/23 09:25	09/12/23 18:14	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/11/23 09:25	09/12/23 18:14	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/11/23 09:25	09/12/23 18:14	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		09/11/23 09:25	09/12/23 18:14	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/11/23 09:25	09/12/23 18:14	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		09/11/23 09:25	09/12/23 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*09/11/23 09:25*	*09/12/23 18:14*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Client Sample ID: FS16

Lab Sample ID: 890-5224-7
Matrix: Solid
Date Collected: 09/07/23 13:15
Date Received: 09/08/23 08:46
Sample Depth: 1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*09/11/23 09:25*	*09/12/23 18:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2	mg/Kg			09/12/23 09:18	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2	mg/Kg		09/11/23 10:05	09/11/23 18:04	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2	mg/Kg		09/11/23 10:05	09/11/23 18:04	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2	mg/Kg		09/11/23 10:05	09/11/23 18:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*147*	*S1+*	*70 - 130*	*09/11/23 10:05*	*09/11/23 18:04*	*1*
o-Terphenyl	*129*		*70 - 130*	*09/11/23 10:05*	*09/11/23 18:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**507**		4.99	mg/Kg			09/14/23 05:07	1

Client Sample ID: FS17

Lab Sample ID: 890-5224-8
Matrix: Solid
Date Collected: 09/07/23 13:20
Date Received: 09/08/23 08:46
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/11/23 09:25	09/12/23 18:34	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/11/23 09:25	09/12/23 18:34	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		09/11/23 09:25	09/12/23 18:34	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/11/23 09:25	09/12/23 18:34	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		09/11/23 09:25	09/12/23 18:34	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/11/23 09:25	09/12/23 18:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*09/11/23 09:25*	*09/12/23 18:34*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*09/11/23 09:25*	*09/12/23 18:34*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4	mg/Kg			09/12/23 09:18	1

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Client Sample ID: FS17

Lab Sample ID: 890-5224-8
Matrix: Solid
Date Collected: 09/07/23 13:20
Date Received: 09/08/23 08:46
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		09/11/23 10:05	09/11/23 18:26	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		09/11/23 10:05	09/11/23 18:26	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		09/11/23 10:05	09/11/23 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*127*		*70 - 130*	*09/11/23 10:05*	*09/11/23 18:26*	*1*
o-Terphenyl	*108*		*70 - 130*	*09/11/23 10:05*	*09/11/23 18:26*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**356**		4.97		mg/Kg			09/14/23 05:27	1

Client Sample ID: FS18

Lab Sample ID: 890-5224-9
Matrix: Solid
Date Collected: 09/07/23 14:10
Date Received: 09/08/23 08:46
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/11/23 09:25	09/12/23 18:54	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/11/23 09:25	09/12/23 18:54	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/11/23 09:25	09/12/23 18:54	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/11/23 09:25	09/12/23 18:54	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/11/23 09:25	09/12/23 18:54	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/11/23 09:25	09/12/23 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*09/11/23 09:25*	*09/12/23 18:54*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*09/11/23 09:25*	*09/12/23 18:54*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			09/12/23 09:18	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		09/11/23 10:05	09/11/23 18:48	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		09/11/23 10:05	09/11/23 18:48	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		09/11/23 10:05	09/11/23 18:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*136*	*S1+*	*70 - 130*	*09/11/23 10:05*	*09/11/23 18:48*	*1*
o-Terphenyl	*117*		*70 - 130*	*09/11/23 10:05*	*09/11/23 18:48*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Client Sample ID: FS18

Lab Sample ID: 890-5224-9
Matrix: Solid
Date Collected: 09/07/23 14:10
Date Received: 09/08/23 08:46
Sample Depth: 1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1070		4.98		mg/Kg			09/14/23 05:34	1

Client Sample ID: FS19

Lab Sample ID: 890-5224-10
Matrix: Solid
Date Collected: 09/07/23 14:15
Date Received: 09/08/23 08:46
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 19:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 19:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 19:15	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/11/23 09:25	09/12/23 19:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/11/23 09:25	09/12/23 19:15	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/11/23 09:25	09/12/23 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*09/11/23 09:25*	*09/12/23 19:15*	*1*
1,4-Difluorobenzene (Surr)	*59*	*S1-*	*70 - 130*	*09/11/23 09:25*	*09/12/23 19:15*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/13/23 12:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/12/23 09:18	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/11/23 10:05	09/11/23 19:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/11/23 10:05	09/11/23 19:09	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/11/23 10:05	09/11/23 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*125*		*70 - 130*	*09/11/23 10:05*	*09/11/23 19:09*	*1*
o-Terphenyl	*108*		*70 - 130*	*09/11/23 10:05*	*09/11/23 19:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	270		5.00		mg/Kg			09/14/23 05:53	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Client Sample ID: FS20

Lab Sample ID: 890-5224-11
Matrix: Solid
Date Collected: 09/07/23 14:35
Date Received: 09/08/23 08:46
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/12/23 14:00	09/13/23 11:57	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/12/23 14:00	09/13/23 11:57	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/12/23 14:00	09/13/23 11:57	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/12/23 14:00	09/13/23 11:57	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/12/23 14:00	09/13/23 11:57	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/12/23 14:00	09/13/23 11:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*09/12/23 14:00*	*09/13/23 11:57*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*09/12/23 14:00*	*09/13/23 11:57*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/15/23 16:48	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			09/13/23 10:49	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		09/12/23 11:26	09/12/23 12:06	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		09/12/23 11:26	09/12/23 12:06	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		09/12/23 11:26	09/12/23 12:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*09/12/23 11:26*	*09/12/23 12:06*	*1*
o-Terphenyl	*103*		*70 - 130*	*09/12/23 11:26*	*09/12/23 12:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**750**		4.95		mg/Kg			09/14/23 06:00	1

Client Sample ID: FS21

Lab Sample ID: 890-5224-12
Matrix: Solid
Date Collected: 09/07/23 14:40
Date Received: 09/08/23 08:46
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/11/23 08:29	09/11/23 17:38	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/11/23 08:29	09/11/23 17:38	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/11/23 08:29	09/11/23 17:38	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		09/11/23 08:29	09/11/23 17:38	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/11/23 08:29	09/11/23 17:38	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		09/11/23 08:29	09/11/23 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*09/11/23 08:29*	*09/11/23 17:38*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Client Sample ID: FS21

Lab Sample ID: 890-5224-12
Matrix: Solid
Date Collected: 09/07/23 14:40
Date Received: 09/08/23 08:46
Sample Depth: 1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*09/11/23 08:29*	*09/11/23 17:38*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			09/12/23 08:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7	mg/Kg			09/13/23 10:49	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7	mg/Kg		09/12/23 11:26	09/12/23 13:11	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7	mg/Kg		09/12/23 11:26	09/12/23 13:11	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		09/12/23 11:26	09/12/23 13:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*09/12/23 11:26*	*09/12/23 13:11*	*1*
o-Terphenyl	*102*		*70 - 130*	*09/12/23 11:26*	*09/12/23 13:11*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**158**		4.97	mg/Kg			09/14/23 06:07	1

Client Sample ID: SW04

Lab Sample ID: 890-5224-13
Matrix: Solid
Date Collected: 09/07/23 14:55
Date Received: 09/08/23 08:46
Sample Depth: 0-1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/11/23 08:29	09/11/23 17:59	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/11/23 08:29	09/11/23 17:59	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/11/23 08:29	09/11/23 17:59	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		09/11/23 08:29	09/11/23 17:59	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/11/23 08:29	09/11/23 17:59	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		09/11/23 08:29	09/11/23 17:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*09/11/23 08:29*	*09/11/23 17:59*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*09/11/23 08:29*	*09/11/23 17:59*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			09/12/23 08:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			09/13/23 10:49	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Client Sample ID: SW04
Date Collected: 09/07/23 14:55
Date Received: 09/08/23 08:46
Sample Depth: 0-1

Lab Sample ID: 890-5224-13
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/12/23 11:26	09/12/23 13:32	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/12/23 11:26	09/12/23 13:32	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/12/23 11:26	09/12/23 13:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*09/12/23 11:26*	*09/12/23 13:32*	*1*
o-Terphenyl	*102*		*70 - 130*	*09/12/23 11:26*	*09/12/23 13:32*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**455**		4.96		mg/Kg			09/14/23 06:13	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-33088-A-1-C MS	Matrix Spike	110	110
880-33088-A-1-D MSD	Matrix Spike Duplicate	113	110
890-5220-A-1-B MS	Matrix Spike	93	88
890-5220-A-1-C MSD	Matrix Spike Duplicate	88	97
890-5224-1	FS11	62 S1-	104
890-5224-2	FS12	88	85
890-5224-3	FS13	73	89
890-5224-4	FS14	69 S1-	91
890-5224-5	SW03	88	75
890-5224-6	FS15	93	76
890-5224-7	FS16	85	68 S1-
890-5224-8	FS17	95	75
890-5224-9	FS18	94	77
890-5224-10	FS19	93	59 S1-
890-5224-11	FS20	90	101
890-5224-12	FS21	89	106
890-5224-13	SW04	86	100
890-5231-A-1-A MS	Matrix Spike	242 S1+	227 S1+
890-5231-A-1-B MSD	Matrix Spike Duplicate	302 S1+	279 S1+
LCS 880-62128/1-A	Lab Control Sample	88	93
LCS 880-62129/1-A	Lab Control Sample	110	114
LCS 880-62273/1-A	Lab Control Sample	94	98
LCSD 880-62128/2-A	Lab Control Sample Dup	88	92
LCSD 880-62129/2-A	Lab Control Sample Dup	106	109
LCSD 880-62273/2-A	Lab Control Sample Dup	85	90
MB 880-62128/5-A	Method Blank	107	110
MB 880-62129/5-A	Method Blank	70	95
MB 880-62273/5-A	Method Blank	103	132 S1+
MB 880-62281/5-A	Method Blank	108	121

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-5220-A-1-G MS	Matrix Spike	106	79
890-5220-A-1-H MSD	Matrix Spike Duplicate	122	93
890-5224-1	FS11	128	115
890-5224-2	FS12	124	109
890-5224-3	FS13	121	100
890-5224-4	FS14	123	107
890-5224-5	SW03	109	93
890-5224-6	FS15	142 S1+	123
890-5224-7	FS16	147 S1+	129
890-5224-8	FS17	127	108

Surrogate Summary

Client: Ensolum Job ID: 890-5224-1
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE SDG: 03C1558144

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
		1CO1	OTPH1								
Lab Sample ID	Client Sample ID	(70-130)	(70-130)								
890-5224-9	FS18	136 S1+	117								
890-5224-10	FS19	125	108								
890-5224-11	FS20	120	103								
890-5224-11 MS	FS20	132 S1+	102								
890-5224-11 MSD	FS20	133 S1+	103								
890-5224-12	FS21	119	102								
890-5224-13	SW04	116	102								
LCS 880-62150/2-A	Lab Control Sample	109	104								
LCS 880-62268/2-A	Lab Control Sample	105	103								
LCSD 880-62150/3-A	Lab Control Sample Dup	111	102								
LCSD 880-62268/3-A	Lab Control Sample Dup	106	100								
MB 880-62150/1-A	Method Blank	124	108								
MB 880-62268/1-A	Method Blank	123	109								

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-62128/5-A
Matrix: Solid
Analysis Batch: 62126

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62128

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/11/23 08:29	09/11/23 11:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/11/23 08:29	09/11/23 11:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/11/23 08:29	09/11/23 11:33	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/11/23 08:29	09/11/23 11:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/11/23 08:29	09/11/23 11:33	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/11/23 08:29	09/11/23 11:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*09/11/23 08:29*	*09/11/23 11:33*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*09/11/23 08:29*	*09/11/23 11:33*	*1*

Lab Sample ID: LCS 880-62128/1-A
Matrix: Solid
Analysis Batch: 62126

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62128

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09879		mg/Kg		99	70 - 130		
Toluene			0.100	0.09526		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.08903		mg/Kg		89	70 - 130		
m-Xylene & p-Xylene			0.200	0.1700		mg/Kg		85	70 - 130		
o-Xylene			0.100	0.07593		mg/Kg		76	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: LCSD 880-62128/2-A
Matrix: Solid
Analysis Batch: 62126

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62128

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1039		mg/Kg		104	70 - 130	5	35
Toluene			0.100	0.09601		mg/Kg		96	70 - 130	1	35
Ethylbenzene			0.100	0.09230		mg/Kg		92	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1839		mg/Kg		92	70 - 130	8	35
o-Xylene			0.100	0.08759		mg/Kg		88	70 - 130	14	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 890-5220-A-1-B MS
Matrix: Solid
Analysis Batch: 62126

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62128

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.0996	0.08712		mg/Kg		87	70 - 130		
Toluene	<0.00202	U	0.0996	0.08911		mg/Kg		89	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

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

Lab Sample ID: 890-5220-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 62126 — **Prep Batch: 62128**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.0996	0.08695		mg/Kg		87	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1783		mg/Kg		90	70 - 130
o-Xylene	<0.00202	U	0.0996	0.08376		mg/Kg		84	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*

Lab Sample ID: 890-5220-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 62126 — **Prep Batch: 62128**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.101	0.1085		mg/Kg		108	70 - 130	22	35
Toluene	<0.00202	U	0.101	0.09862		mg/Kg		98	70 - 130	10	35
Ethylbenzene	<0.00202	U	0.101	0.08606		mg/Kg		85	70 - 130	1	35
m-Xylene & p-Xylene	<0.00403	U	0.202	0.1670		mg/Kg		83	70 - 130	7	35
o-Xylene	<0.00202	U	0.101	0.08790		mg/Kg		87	70 - 130	5	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: MB 880-62129/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 62238 — **Prep Batch: 62129**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/11/23 09:25	09/12/23 11:40	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/11/23 09:25	09/12/23 11:40	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/11/23 09:25	09/12/23 11:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/11/23 09:25	09/12/23 11:40	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/11/23 09:25	09/12/23 11:40	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/11/23 09:25	09/12/23 11:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*70 - 130*	*09/11/23 09:25*	*09/12/23 11:40*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*09/11/23 09:25*	*09/12/23 11:40*	*1*

Lab Sample ID: LCS 880-62129/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 62238 — **Prep Batch: 62129**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1071		mg/Kg		107	70 - 130
Toluene	0.100	0.1062		mg/Kg		106	70 - 130
Ethylbenzene	0.100	0.1055		mg/Kg		106	70 - 130
m-Xylene & p-Xylene	0.200	0.2238		mg/Kg		112	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

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

Lab Sample ID: LCS 880-62129/1-A
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62129

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.1114		mg/Kg		111	70 - 130		

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

Lab Sample ID: LCSD 880-62129/2-A
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62129

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	4	35
Toluene			0.100	0.09934		mg/Kg		99	70 - 130	7	35
Ethylbenzene			0.100	0.09647		mg/Kg		96	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.2034		mg/Kg		102	70 - 130	10	35
o-Xylene			0.100	0.1016		mg/Kg		102	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 880-33088-A-1-C MS
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62129

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	0.0287		0.0998	0.1054		mg/Kg		77	70 - 130		
Toluene	0.297	F1	0.0998	0.1010	F1	mg/Kg		-196	70 - 130		
Ethylbenzene	0.0221		0.0998	0.09735		mg/Kg		75	70 - 130		
m-Xylene & p-Xylene	0.0463		0.200	0.1994		mg/Kg		77	70 - 130		
o-Xylene	0.0312		0.0998	0.1006		mg/Kg		70	70 - 130		

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

Lab Sample ID: 880-33088-A-1-D MSD
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 62129

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.0287		0.0990	0.1063		mg/Kg		78	70 - 130	1	35
Toluene	0.297	F1	0.0990	0.1058	F1	mg/Kg		-193	70 - 130	5	35
Ethylbenzene	0.0221		0.0990	0.1026		mg/Kg		81	70 - 130	5	35
m-Xylene & p-Xylene	0.0463		0.198	0.2097		mg/Kg		82	70 - 130	5	35
o-Xylene	0.0312		0.0990	0.1059		mg/Kg		75	70 - 130	5	35

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

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

Lab Sample ID: 880-33088-A-1-D MSD
Matrix: Solid
Analysis Batch: 62238

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 62129

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

Lab Sample ID: MB 880-62273/5-A
Matrix: Solid
Analysis Batch: 62237

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62273

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:46	09/13/23 06:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:46	09/13/23 06:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:46	09/13/23 06:33	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/12/23 11:46	09/13/23 06:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/12/23 11:46	09/13/23 06:33	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/12/23 11:46	09/13/23 06:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	09/12/23 11:46	09/13/23 06:33	1
1,4-Difluorobenzene (Surr)	132	S1+	70 - 130	09/12/23 11:46	09/13/23 06:33	1

Lab Sample ID: LCS 880-62273/1-A
Matrix: Solid
Analysis Batch: 62237

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62273

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09939		mg/Kg		99	70 - 130		
Toluene			0.100	0.09793		mg/Kg		98	70 - 130		
Ethylbenzene			0.100	0.09354		mg/Kg		94	70 - 130		
m-Xylene & p-Xylene			0.200	0.1981		mg/Kg		99	70 - 130		
o-Xylene			0.100	0.09451		mg/Kg		95	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: LCSD 880-62273/2-A
Matrix: Solid
Analysis Batch: 62237

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62273

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09184		mg/Kg		92	70 - 130	8	35
Toluene			0.100	0.09043		mg/Kg		90	70 - 130	8	35
Ethylbenzene			0.100	0.07866		mg/Kg		79	70 - 130	17	35
m-Xylene & p-Xylene			0.200	0.1760		mg/Kg		88	70 - 130	12	35
o-Xylene			0.100	0.08506		mg/Kg		85	70 - 130	11	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	85		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

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

Lab Sample ID: LCSD 880-62273/2-A
Matrix: Solid
Analysis Batch: 62237

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62273

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

Lab Sample ID: 890-5231-A-1-A MS
Matrix: Solid
Analysis Batch: 62237

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62273

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U F1 F2	0.0998	0.1162		mg/Kg		116	70 - 130
Toluene	<0.00200	U F1	0.0998	0.04723	F1	mg/Kg		46	70 - 130
Ethylbenzene	<0.00200	U F2	0.0998	0.07390		mg/Kg		74	70 - 130
m-Xylene & p-Xylene	<0.00401	U F1 F2	0.200	0.2476		mg/Kg		124	70 - 130
o-Xylene	<0.00200	U F1 F2	0.0998	0.1312	F1	mg/Kg		131	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	242	S1+	70 - 130
1,4-Difluorobenzene (Surr)	227	S1+	70 - 130

Lab Sample ID: 890-5231-A-1-B MSD
Matrix: Solid
Analysis Batch: 62237

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 62273

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1 F2	0.0990	0.1986	F1 F2	mg/Kg		201	70 - 130	52	35
Toluene	<0.00200	U F1	0.0990	0.04674	F1	mg/Kg		46	70 - 130	1	35
Ethylbenzene	<0.00200	U F2	0.0990	0.1141	F2	mg/Kg		115	70 - 130	43	35
m-Xylene & p-Xylene	<0.00401	U F1 F2	0.198	0.4186	F1 F2	mg/Kg		211	70 - 130	51	35
o-Xylene	<0.00200	U F1 F2	0.0990	0.2155	F1 F2	mg/Kg		218	70 - 130	49	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	302	S1+	70 - 130
1,4-Difluorobenzene (Surr)	279	S1+	70 - 130

Lab Sample ID: MB 880-62281/5-A
Matrix: Solid
Analysis Batch: 62237

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62281

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/12/23 14:24	09/12/23 18:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/12/23 14:24	09/12/23 18:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/12/23 14:24	09/12/23 18:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/12/23 14:24	09/12/23 18:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/12/23 14:24	09/12/23 18:58	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/12/23 14:24	09/12/23 18:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	09/12/23 14:24	09/12/23 18:58	1
1,4-Difluorobenzene (Surr)	121		70 - 130	09/12/23 14:24	09/12/23 18:58	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

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

Lab Sample ID: MB 880-62150/1-A
Matrix: Solid
Analysis Batch: 62116

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62150

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/11/23 08:00	09/11/23 08:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/11/23 08:00	09/11/23 08:30	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/11/23 08:00	09/11/23 08:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*09/11/23 08:00*	*09/11/23 08:30*	*1*
o-Terphenyl	*108*		*70 - 130*	*09/11/23 08:00*	*09/11/23 08:30*	*1*

Lab Sample ID: LCS 880-62150/2-A
Matrix: Solid
Analysis Batch: 62116

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62150

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1053		mg/Kg		105	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	978.7		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*109*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

Lab Sample ID: LCSD 880-62150/3-A
Matrix: Solid
Analysis Batch: 62116

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62150

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1066		mg/Kg		107	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1014		mg/Kg		101	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*111*		*70 - 130*
o-Terphenyl	*102*		*70 - 130*

Lab Sample ID: 890-5220-A-1-G MS
Matrix: Solid
Analysis Batch: 62116

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62150

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	997	1060		mg/Kg		105	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.3	U	997	1023		mg/Kg		101	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

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

Lab Sample ID: 890-5220-A-1-G MS
Matrix: Solid
Analysis Batch: 62116

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62150

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	79		70 - 130

Lab Sample ID: 890-5220-A-1-H MSD
Matrix: Solid
Analysis Batch: 62116

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 62150

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	997	1266		mg/Kg		125	70 - 130	18	20
Diesel Range Organics (Over C10-C28)	<50.3	U	997	1196		mg/Kg		118	70 - 130	16	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	93		70 - 130

Lab Sample ID: MB 880-62268/1-A
Matrix: Solid
Analysis Batch: 62229

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62268

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/12/23 08:00	09/12/23 08:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/12/23 08:00	09/12/23 08:26	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/12/23 08:00	09/12/23 08:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	123		70 - 130	09/12/23 08:00	09/12/23 08:26	1
o-Terphenyl	109		70 - 130	09/12/23 08:00	09/12/23 08:26	1

Lab Sample ID: LCS 880-62268/2-A
Matrix: Solid
Analysis Batch: 62229

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62268

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1005		mg/Kg		101	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	963.8		mg/Kg		96	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	103		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

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

Lab Sample ID: LCSD 880-62268/3-A
Matrix: Solid
Analysis Batch: 62229

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62268

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1016		mg/Kg		102	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	976.3		mg/Kg		98	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*100*		*70 - 130*

Lab Sample ID: 890-5224-11 MS
Matrix: Solid
Analysis Batch: 62229

Client Sample ID: FS20
Prep Type: Total/NA
Prep Batch: 62268

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	999	946.3		mg/Kg		95	70 - 130
Diesel Range Organics (Over C10-C28)	<49.6	U	999	1288		mg/Kg		129	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*132*	*S1+*	*70 - 130*
o-Terphenyl	*102*		*70 - 130*

Lab Sample ID: 890-5224-11 MSD
Matrix: Solid
Analysis Batch: 62229

Client Sample ID: FS20
Prep Type: Total/NA
Prep Batch: 62268

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	999	956.5		mg/Kg		96	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.6	U	999	1296		mg/Kg		130	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*133*	*S1+*	*70 - 130*
o-Terphenyl	*103*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-62211/1-A
Matrix: Solid
Analysis Batch: 62363

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/13/23 11:15	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-62211/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 62363

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	248.2		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-62211/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 62363

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	245.1		mg/Kg		98	90 - 110	1	20

Lab Sample ID: 880-33057-A-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 62363

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	50.3		251	302.6		mg/Kg		101	90 - 110		

Lab Sample ID: 880-33057-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 62363

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	50.3		251	299.1		mg/Kg		99	90 - 110	1	20

Lab Sample ID: MB 880-62266/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 62407

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/14/23 03:13	1

Lab Sample ID: LCS 880-62266/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 62407

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	243.2		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-62266/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 62407

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	248.3		mg/Kg		99	90 - 110	2	20

Lab Sample ID: 890-5224-7 MS — **Client Sample ID: FS16**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 62407

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	507		250	778.8		mg/Kg		109	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-5224-7 MSD
Matrix: Solid
Analysis Batch: 62407

Client Sample ID: FS16
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	507		250	776.2		mg/Kg		108	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

GC VOA

Analysis Batch: 62126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-12	FS21	Total/NA	Solid	8021B	62128
890-5224-13	SW04	Total/NA	Solid	8021B	62128
MB 880-62128/5-A	Method Blank	Total/NA	Solid	8021B	62128
LCS 880-62128/1-A	Lab Control Sample	Total/NA	Solid	8021B	62128
LCSD 880-62128/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	62128
890-5220-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	62128
890-5220-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	62128

Prep Batch: 62128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-12	FS21	Total/NA	Solid	5035	
890-5224-13	SW04	Total/NA	Solid	5035	
MB 880-62128/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-62128/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-62128/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5220-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-5220-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 62129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-1	FS11	Total/NA	Solid	5035	
890-5224-2	FS12	Total/NA	Solid	5035	
890-5224-3	FS13	Total/NA	Solid	5035	
890-5224-4	FS14	Total/NA	Solid	5035	
890-5224-5	SW03	Total/NA	Solid	5035	
890-5224-6	FS15	Total/NA	Solid	5035	
890-5224-7	FS16	Total/NA	Solid	5035	
890-5224-8	FS17	Total/NA	Solid	5035	
890-5224-9	FS18	Total/NA	Solid	5035	
890-5224-10	FS19	Total/NA	Solid	5035	
MB 880-62129/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-62129/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-62129/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-33088-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
880-33088-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 62237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-11	FS20	Total/NA	Solid	8021B	62273
MB 880-62273/5-A	Method Blank	Total/NA	Solid	8021B	62273
MB 880-62281/5-A	Method Blank	Total/NA	Solid	8021B	62281
LCS 880-62273/1-A	Lab Control Sample	Total/NA	Solid	8021B	62273
LCSD 880-62273/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	62273
890-5231-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	62273
890-5231-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	62273

Analysis Batch: 62238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-1	FS11	Total/NA	Solid	8021B	62129
890-5224-2	FS12	Total/NA	Solid	8021B	62129
890-5224-3	FS13	Total/NA	Solid	8021B	62129

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

GC VOA (Continued)

Analysis Batch: 62238 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-4	FS14	Total/NA	Solid	8021B	62129
890-5224-5	SW03	Total/NA	Solid	8021B	62129
890-5224-6	FS15	Total/NA	Solid	8021B	62129
890-5224-7	FS16	Total/NA	Solid	8021B	62129
890-5224-8	FS17	Total/NA	Solid	8021B	62129
890-5224-9	FS18	Total/NA	Solid	8021B	62129
890-5224-10	FS19	Total/NA	Solid	8021B	62129
MB 880-62129/5-A	Method Blank	Total/NA	Solid	8021B	62129
LCS 880-62129/1-A	Lab Control Sample	Total/NA	Solid	8021B	62129
LCSD 880-62129/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	62129
880-33088-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	62129
880-33088-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	62129

Analysis Batch: 62240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-1	FS11	Total/NA	Solid	Total BTEX	
890-5224-2	FS12	Total/NA	Solid	Total BTEX	
890-5224-3	FS13	Total/NA	Solid	Total BTEX	
890-5224-4	FS14	Total/NA	Solid	Total BTEX	
890-5224-5	SW03	Total/NA	Solid	Total BTEX	
890-5224-6	FS15	Total/NA	Solid	Total BTEX	
890-5224-7	FS16	Total/NA	Solid	Total BTEX	
890-5224-8	FS17	Total/NA	Solid	Total BTEX	
890-5224-9	FS18	Total/NA	Solid	Total BTEX	
890-5224-10	FS19	Total/NA	Solid	Total BTEX	
890-5224-11	FS20	Total/NA	Solid	Total BTEX	
890-5224-12	FS21	Total/NA	Solid	Total BTEX	
890-5224-13	SW04	Total/NA	Solid	Total BTEX	

Prep Batch: 62273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-11	FS20	Total/NA	Solid	5035	
MB 880-62273/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-62273/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-62273/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5231-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-5231-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 62281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-62281/5-A	Method Blank	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 62116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-1	FS11	Total/NA	Solid	8015B NM	62150
890-5224-2	FS12	Total/NA	Solid	8015B NM	62150
890-5224-3	FS13	Total/NA	Solid	8015B NM	62150
890-5224-4	FS14	Total/NA	Solid	8015B NM	62150
890-5224-5	SW03	Total/NA	Solid	8015B NM	62150

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

GC Semi VOA (Continued)

Analysis Batch: 62116 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-6	FS15	Total/NA	Solid	8015B NM	62150
890-5224-7	FS16	Total/NA	Solid	8015B NM	62150
890-5224-8	FS17	Total/NA	Solid	8015B NM	62150
890-5224-9	FS18	Total/NA	Solid	8015B NM	62150
890-5224-10	FS19	Total/NA	Solid	8015B NM	62150
MB 880-62150/1-A	Method Blank	Total/NA	Solid	8015B NM	62150
LCS 880-62150/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	62150
LCSD 880-62150/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	62150
890-5220-A-1-G MS	Matrix Spike	Total/NA	Solid	8015B NM	62150
890-5220-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	62150

Prep Batch: 62150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-1	FS11	Total/NA	Solid	8015NM Prep	
890-5224-2	FS12	Total/NA	Solid	8015NM Prep	
890-5224-3	FS13	Total/NA	Solid	8015NM Prep	
890-5224-4	FS14	Total/NA	Solid	8015NM Prep	
890-5224-5	SW03	Total/NA	Solid	8015NM Prep	
890-5224-6	FS15	Total/NA	Solid	8015NM Prep	
890-5224-7	FS16	Total/NA	Solid	8015NM Prep	
890-5224-8	FS17	Total/NA	Solid	8015NM Prep	
890-5224-9	FS18	Total/NA	Solid	8015NM Prep	
890-5224-10	FS19	Total/NA	Solid	8015NM Prep	
MB 880-62150/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-62150/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-62150/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5220-A-1-G MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5220-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 62228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-1	FS11	Total/NA	Solid	8015 NM	
890-5224-2	FS12	Total/NA	Solid	8015 NM	
890-5224-3	FS13	Total/NA	Solid	8015 NM	
890-5224-4	FS14	Total/NA	Solid	8015 NM	
890-5224-5	SW03	Total/NA	Solid	8015 NM	
890-5224-6	FS15	Total/NA	Solid	8015 NM	
890-5224-7	FS16	Total/NA	Solid	8015 NM	
890-5224-8	FS17	Total/NA	Solid	8015 NM	
890-5224-9	FS18	Total/NA	Solid	8015 NM	
890-5224-10	FS19	Total/NA	Solid	8015 NM	
890-5224-11	FS20	Total/NA	Solid	8015 NM	
890-5224-12	FS21	Total/NA	Solid	8015 NM	
890-5224-13	SW04	Total/NA	Solid	8015 NM	

Analysis Batch: 62229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-11	FS20	Total/NA	Solid	8015B NM	62268
890-5224-12	FS21	Total/NA	Solid	8015B NM	62268
890-5224-13	SW04	Total/NA	Solid	8015B NM	62268
MB 880-62268/1-A	Method Blank	Total/NA	Solid	8015B NM	62268

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

GC Semi VOA (Continued)

Analysis Batch: 62229 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-62268/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	62268
LCSD 880-62268/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	62268
890-5224-11 MS	FS20	Total/NA	Solid	8015B NM	62268
890-5224-11 MSD	FS20	Total/NA	Solid	8015B NM	62268

Prep Batch: 62268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-11	FS20	Total/NA	Solid	8015NM Prep	
890-5224-12	FS21	Total/NA	Solid	8015NM Prep	
890-5224-13	SW04	Total/NA	Solid	8015NM Prep	
MB 880-62268/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-62268/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-62268/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5224-11 MS	FS20	Total/NA	Solid	8015NM Prep	
890-5224-11 MSD	FS20	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 62211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-1	FS11	Soluble	Solid	DI Leach	
890-5224-2	FS12	Soluble	Solid	DI Leach	
MB 880-62211/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-62211/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-62211/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-33057-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-33057-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 62266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-3	FS13	Soluble	Solid	DI Leach	
890-5224-4	FS14	Soluble	Solid	DI Leach	
890-5224-5	SW03	Soluble	Solid	DI Leach	
890-5224-6	FS15	Soluble	Solid	DI Leach	
890-5224-7	FS16	Soluble	Solid	DI Leach	
890-5224-8	FS17	Soluble	Solid	DI Leach	
890-5224-9	FS18	Soluble	Solid	DI Leach	
890-5224-10	FS19	Soluble	Solid	DI Leach	
890-5224-11	FS20	Soluble	Solid	DI Leach	
890-5224-12	FS21	Soluble	Solid	DI Leach	
890-5224-13	SW04	Soluble	Solid	DI Leach	
MB 880-62266/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-62266/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-62266/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5224-7 MS	FS16	Soluble	Solid	DI Leach	
890-5224-7 MSD	FS16	Soluble	Solid	DI Leach	

Analysis Batch: 62363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-1	FS11	Soluble	Solid	300.0	62211
890-5224-2	FS12	Soluble	Solid	300.0	62211

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

HPLC/IC (Continued)

Analysis Batch: 62363 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-62211/1-A	Method Blank	Soluble	Solid	300.0	62211
LCS 880-62211/2-A	Lab Control Sample	Soluble	Solid	300.0	62211
LCSD 880-62211/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	62211
880-33057-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	62211
880-33057-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	62211

Analysis Batch: 62407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5224-3	FS13	Soluble	Solid	300.0	62266
890-5224-4	FS14	Soluble	Solid	300.0	62266
890-5224-5	SW03	Soluble	Solid	300.0	62266
890-5224-6	FS15	Soluble	Solid	300.0	62266
890-5224-7	FS16	Soluble	Solid	300.0	62266
890-5224-8	FS17	Soluble	Solid	300.0	62266
890-5224-9	FS18	Soluble	Solid	300.0	62266
890-5224-10	FS19	Soluble	Solid	300.0	62266
890-5224-11	FS20	Soluble	Solid	300.0	62266
890-5224-12	FS21	Soluble	Solid	300.0	62266
890-5224-13	SW04	Soluble	Solid	300.0	62266
MB 880-62266/1-A	Method Blank	Soluble	Solid	300.0	62266
LCS 880-62266/2-A	Lab Control Sample	Soluble	Solid	300.0	62266
LCSD 880-62266/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	62266
890-5224-7 MS	FS16	Soluble	Solid	300.0	62266
890-5224-7 MSD	FS16	Soluble	Solid	300.0	62266

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Client Sample ID: FS11

Date Collected: 09/07/23 10:20
Date Received: 09/08/23 08:46

Lab Sample ID: 890-5224-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	62129	09/11/23 09:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/12/23 14:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62240	09/12/23 17:29	AJ	EET MID
Total/NA	Analysis	8015 NM		1			62228	09/11/23 18:07	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	62150	09/11/23 10:05	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62116	09/11/23 15:52	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	62211	09/11/23 14:22	AG	EET MID
Soluble	Analysis	300.0		1			62363	09/13/23 14:20	CH	EET MID

Client Sample ID: FS12

Date Collected: 09/07/23 10:25
Date Received: 09/08/23 08:46

Lab Sample ID: 890-5224-2
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	62129	09/11/23 09:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/12/23 16:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62240	09/12/23 17:29	AJ	EET MID
Total/NA	Analysis	8015 NM		1			62228	09/11/23 18:07	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	62150	09/11/23 10:05	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62116	09/11/23 16:14	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	62211	09/11/23 14:22	AG	EET MID
Soluble	Analysis	300.0		1			62363	09/13/23 14:26	CH	EET MID

Client Sample ID: FS13

Date Collected: 09/07/23 11:00
Date Received: 09/08/23 08:46

Lab Sample ID: 890-5224-3
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	62129	09/11/23 09:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/12/23 16:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62240	09/13/23 12:14	AJ	EET MID
Total/NA	Analysis	8015 NM		1			62228	09/11/23 18:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	62150	09/11/23 10:05	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62116	09/11/23 16:36	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	62266	09/12/23 10:26	AG	EET MID
Soluble	Analysis	300.0		1			62407	09/14/23 04:40	CH	EET MID

Client Sample ID: FS14

Date Collected: 09/07/23 11:05
Date Received: 09/08/23 08:46

Lab Sample ID: 890-5224-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	62129	09/11/23 09:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/12/23 17:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62240	09/13/23 12:14	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Client Sample ID: FS14
Date Collected: 09/07/23 11:05
Date Received: 09/08/23 08:46

Lab Sample ID: 890-5224-4
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			62228	09/11/23 18:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	62150	09/11/23 10:05	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62116	09/11/23 16:58	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	62266	09/12/23 10:26	AG	EET MID
Soluble	Analysis	300.0		1			62407	09/14/23 04:47	CH	EET MID

Client Sample ID: SW03
Date Collected: 09/07/23 12:50
Date Received: 09/08/23 08:46

Lab Sample ID: 890-5224-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	62129	09/11/23 09:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/12/23 17:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62240	09/13/23 12:14	AJ	EET MID
Total/NA	Analysis	8015 NM		1			62228	09/11/23 18:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	62150	09/11/23 10:05	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62116	09/11/23 17:20	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	62266	09/12/23 10:26	AG	EET MID
Soluble	Analysis	300.0		1			62407	09/14/23 04:53	CH	EET MID

Client Sample ID: FS15
Date Collected: 09/07/23 13:10
Date Received: 09/08/23 08:46

Lab Sample ID: 890-5224-6
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			4.97 g	5 mL	62129	09/11/23 09:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/12/23 17:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62240	09/13/23 12:14	AJ	EET MID
Total/NA	Analysis	8015 NM		1			62228	09/11/23 18:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	62150	09/11/23 10:05	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62116	09/11/23 17:43	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	62266	09/12/23 10:26	AG	EET MID
Soluble	Analysis	300.0		1			62407	09/14/23 05:00	CH	EET MID

Client Sample ID: FS16
Date Collected: 09/07/23 13:15
Date Received: 09/08/23 08:46

Lab Sample ID: 890-5224-7
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			4.95 g	5 mL	62129	09/11/23 09:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/12/23 18:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62240	09/13/23 12:14	AJ	EET MID
Total/NA	Analysis	8015 NM		1			62228	09/12/23 09:18	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	62150	09/11/23 10:05	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62116	09/11/23 18:04	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Client Sample ID: FS16
Date Collected: 09/07/23 13:15
Date Received: 09/08/23 08:46

Lab Sample ID: 890-5224-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	62266	09/12/23 10:26	AG	EET MID
Soluble	Analysis	300.0		1			62407	09/14/23 05:07	CH	EET MID

Client Sample ID: FS17
Date Collected: 09/07/23 13:20
Date Received: 09/08/23 08:46

Lab Sample ID: 890-5224-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	62129	09/11/23 09:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/12/23 18:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62240	09/13/23 12:14	AJ	EET MID
Total/NA	Analysis	8015 NM		1			62228	09/12/23 09:18	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	62150	09/11/23 10:05	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62116	09/11/23 18:26	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	62266	09/12/23 10:26	AG	EET MID
Soluble	Analysis	300.0		1			62407	09/14/23 05:27	CH	EET MID

Client Sample ID: FS18
Date Collected: 09/07/23 14:10
Date Received: 09/08/23 08:46

Lab Sample ID: 890-5224-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	62129	09/11/23 09:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/12/23 18:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62240	09/13/23 12:14	AJ	EET MID
Total/NA	Analysis	8015 NM		1			62228	09/12/23 09:18	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	62150	09/11/23 10:05	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62116	09/11/23 18:48	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	62266	09/12/23 10:26	AG	EET MID
Soluble	Analysis	300.0		1			62407	09/14/23 05:34	CH	EET MID

Client Sample ID: FS19
Date Collected: 09/07/23 14:15
Date Received: 09/08/23 08:46

Lab Sample ID: 890-5224-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	62129	09/11/23 09:25	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62238	09/12/23 19:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62240	09/13/23 12:14	AJ	EET MID
Total/NA	Analysis	8015 NM		1			62228	09/12/23 09:18	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	62150	09/11/23 10:05	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62116	09/11/23 19:09	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	62266	09/12/23 10:26	AG	EET MID
Soluble	Analysis	300.0		1			62407	09/14/23 05:53	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Client Sample ID: FS20

Date Collected: 09/07/23 14:35
Date Received: 09/08/23 08:46

Lab Sample ID: 890-5224-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	62273	09/12/23 14:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62237	09/13/23 11:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62240	09/15/23 16:48	AJ	EET MID
Total/NA	Analysis	8015 NM		1			62228	09/13/23 10:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	62268	09/12/23 11:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62229	09/12/23 12:06	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	62266	09/12/23 10:26	AG	EET MID
Soluble	Analysis	300.0		1			62407	09/14/23 06:00	CH	EET MID

Client Sample ID: FS21

Date Collected: 09/07/23 14:40
Date Received: 09/08/23 08:46

Lab Sample ID: 890-5224-12
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	62128	09/11/23 08:29	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62126	09/11/23 17:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62240	09/12/23 08:56	AJ	EET MID
Total/NA	Analysis	8015 NM		1			62228	09/13/23 10:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	62268	09/12/23 11:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62229	09/12/23 13:11	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	62266	09/12/23 10:26	AG	EET MID
Soluble	Analysis	300.0		1			62407	09/14/23 06:07	CH	EET MID

Client Sample ID: SW04

Date Collected: 09/07/23 14:55
Date Received: 09/08/23 08:46

Lab Sample ID: 890-5224-13
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	62128	09/11/23 08:29	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62126	09/11/23 17:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62240	09/12/23 08:56	AJ	EET MID
Total/NA	Analysis	8015 NM		1			62228	09/13/23 10:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	62268	09/12/23 11:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62229	09/12/23 13:32	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	62266	09/12/23 10:26	AG	EET MID
Soluble	Analysis	300.0		1			62407	09/14/23 06:13	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: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5224-1
SDG: 03C1558144

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5224-1	FS11	Solid	09/07/23 10:20	09/08/23 08:46	1
890-5224-2	FS12	Solid	09/07/23 10:25	09/08/23 08:46	1
890-5224-3	FS13	Solid	09/07/23 11:00	09/08/23 08:46	1
890-5224-4	FS14	Solid	09/07/23 11:05	09/08/23 08:46	1
890-5224-5	SW03	Solid	09/07/23 12:50	09/08/23 08:46	0-1
890-5224-6	FS15	Solid	09/07/23 13:10	09/08/23 08:46	1
890-5224-7	FS16	Solid	09/07/23 13:15	09/08/23 08:46	1
890-5224-8	FS17	Solid	09/07/23 13:20	09/08/23 08:46	1
890-5224-9	FS18	Solid	09/07/23 14:10	09/08/23 08:46	1
890-5224-10	FS19	Solid	09/07/23 14:15	09/08/23 08:46	1
890-5224-11	FS20	Solid	09/07/23 14:35	09/08/23 08:46	1
890-5224-12	FS21	Solid	09/07/23 14:40	09/08/23 08:46	1
890-5224-13	SW04	Solid	09/07/23 14:55	09/08/23 08:46	0-1

Released to Imaging: 2/29/2024 4:12:50 PM
Received by OCD: 11/10/2023 1:29:49 PM

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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 2

Project Manager:	Ashley Giovengo	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	575-988-0055 Email:		Garrett.Green@ExxonMobil.com

Work Order Comments

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

Project Name:	PLU 18 Twin Wells Ranch East Satellite	Turn Around	
Project Number:	03C1558144	☒ Routine ☐ Rush	
Project Location:	32.20635, -103.81299	Due Date:	5 days
Sampler's Name:	Mariana O'Dell	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TNN 007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	3.2
Total Containers:		Corrected Temperature:	3.0

ANALYSIS REQUEST

Pres. Code / Parameters: Chlorides, TPH, BTEX

890-5224 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 Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Chlorides	TPH	BTEX	Sample Comments
FS11	S	9/7/23	10:20	1'	C	1	X	X	X	Incident #:
FS12			10:25	1'						NAPP2230551951
FS13			11:00	1'						Cost center:
FS14			11:05	1'						2111031001
SW03			12:50	0-1'						Ashley Giovengo:
FS15			13:10	1'						agiovengo@ensolum.com
FS16			13:15	1'						Ben Belill:
FS17			13:20	1'						bbelill@ensolum.com
FS18			14:10	1'						
FS19	↓	↓	14:15	1'	↓	↓	↓	↓	↓	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			4-9-23 08:46	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5224-1
SDG Number: 03C1558144

Login Number: 5224
List Number: 1
Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5224-1
SDG Number: 03C1558144

Login Number: 5224
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 09/11/23 08:35 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Ashley Giovengo
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 10/24/2023 8:08:24 AM

JOB DESCRIPTION

Poker Lake Unit 18 Twin Wells Ranch East Satellite
SDG NUMBER 03C1558144

JOB NUMBER

890-5467-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 2/29/2024 4:12:50 PM

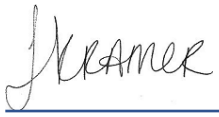
Eurofins Carlsbad

Job Notes

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

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

Authorization



Generated
10/24/2023 8:08:24 AM

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

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Definitions/Glossary

Client: Ensolum
Project/Site: Poker Lake Unit 18 Twin Wells Ranch East Satellite

Job ID: 890-5467-1
SDG: 03C1558144

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Poker Lake Unit 18 Twin Wells Ranch East Satellite

Job ID: 890-5467-1
SDG: 03C1558144

Job ID: 890-5467-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5467-1

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

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

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

Receipt
The samples were received on 10/16/2023 12:59 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH09 (890-5467-1) and BH10 (890-5467-2).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: BH09 (890-5467-1), BH10 (890-5467-2), (CCV 880-65272/2), (LCS 880-64995/1-A), (880-34566-A-41-F), (880-34566-A-41-D MS) and (880-34566-A-41-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-65272 recovered under the lower control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were ran within 12 hours of passing CCV; therefore, the data have been reported.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (LCSD 880-64995/2-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-65061 and analytical batch 880-65020 was outside the upper control limits.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-65061 and analytical batch 880-65020 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

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

Client Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 18 Twin Wells Ranch East Satellite

Job ID: 890-5467-1
SDG: 03C1558144

Client Sample ID: BH09

Lab Sample ID: 890-5467-1
Matrix: Solid
Date Collected: 10/16/23 10:50
Date Received: 10/16/23 12:59
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/18/23 14:55	10/22/23 16:08	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/18/23 14:55	10/22/23 16:08	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/18/23 14:55	10/22/23 16:08	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/18/23 14:55	10/22/23 16:08	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/18/23 14:55	10/22/23 16:08	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/18/23 14:55	10/22/23 16:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*173*	*S1+*	*70 - 130*	*10/18/23 14:55*	*10/22/23 16:08*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*10/18/23 14:55*	*10/22/23 16:08*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/22/23 16:08	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**145**		50.2		mg/Kg			10/19/23 21:42	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		10/19/23 14:03	10/19/23 21:42	1
Diesel Range Organics (Over C10-C28)	**145**		50.2		mg/Kg		10/19/23 14:03	10/19/23 21:42	1
Oil Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		10/19/23 14:03	10/19/23 21:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*10/19/23 14:03*	*10/19/23 21:42*	*1*
o-Terphenyl	*92*		*70 - 130*	*10/19/23 14:03*	*10/19/23 21:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**96.5**		4.95		mg/Kg			10/19/23 03:07	1

Client Sample ID: BH10

Lab Sample ID: 890-5467-2
Matrix: Solid
Date Collected: 10/16/23 11:30
Date Received: 10/16/23 12:59
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/18/23 14:55	10/22/23 16:34	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/18/23 14:55	10/22/23 16:34	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/18/23 14:55	10/22/23 16:34	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/18/23 14:55	10/22/23 16:34	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/18/23 14:55	10/22/23 16:34	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/18/23 14:55	10/22/23 16:34	1

Client Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 18 Twin Wells Ranch East Satellite

Job ID: 890-5467-1
SDG: 03C1558144

Client Sample ID: BH10

Lab Sample ID: 890-5467-2
Matrix: Solid
Date Collected: 10/16/23 11:30
Date Received: 10/16/23 12:59
Sample Depth: 1'

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*202*	*S1+*	*70 - 130*	*10/18/23 14:55*	*10/22/23 16:34*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*10/18/23 14:55*	*10/22/23 16:34*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/22/23 16:34	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**128**		50.1	mg/Kg			10/19/23 22:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1	mg/Kg		10/19/23 14:03	10/19/23 22:05	1
Diesel Range Organics (Over C10-C28)	**128**		50.1	mg/Kg		10/19/23 14:03	10/19/23 22:05	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		10/19/23 14:03	10/19/23 22:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*10/19/23 14:03*	*10/19/23 22:05*	*1*
o-Terphenyl	*110*		*70 - 130*	*10/19/23 14:03*	*10/19/23 22:05*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**707**		5.04	mg/Kg			10/19/23 03:13	1

Surrogate Summary

Client: Ensolum
Project/Site: Poker Lake Unit 18 Twin Wells Ranch East Satellite

Job ID: 890-5467-1
SDG: 03C1558144

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)
880-34566-A-41-D MS	Matrix Spike	193 S1+	95
880-34566-A-41-E MSD	Matrix Spike Duplicate	149 S1+	80
890-5467-1	BH09	173 S1+	93
890-5467-2	BH10	202 S1+	83
LCS 880-64995/1-A	Lab Control Sample	151 S1+	70
LCSD 880-64995/2-A	Lab Control Sample Dup	158 S1+	79
MB 880-64995/5-A	Method Blank	107	87
MB 880-64997/5-A	Method Blank	86	98

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-5466-A-4-D MS	Matrix Spike	103	93
890-5466-A-4-E MSD	Matrix Spike Duplicate	101	92
890-5467-1	BH09	90	92
890-5467-2	BH10	107	110
LCS 880-65061/2-A	Lab Control Sample	83	82
LCSD 880-65061/3-A	Lab Control Sample Dup	82	83
MB 880-65061/1-A	Method Blank	136 S1+	146 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 18 Twin Wells Ranch East Satellite

Job ID: 890-5467-1
SDG: 03C1558144

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-64995/5-A
Matrix: Solid
Analysis Batch: 65272

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64995

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/18/23 14:55	10/22/23 06:31	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/18/23 14:55	10/22/23 06:31	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/18/23 14:55	10/22/23 06:31	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/18/23 14:55	10/22/23 06:31	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/18/23 14:55	10/22/23 06:31	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/18/23 14:55	10/22/23 06:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*10/18/23 14:55*	*10/22/23 06:31*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*10/18/23 14:55*	*10/22/23 06:31*	*1*

Lab Sample ID: LCS 880-64995/1-A
Matrix: Solid
Analysis Batch: 65272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64995

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08796		mg/Kg		88	70 - 130		
Toluene			0.100	0.09472		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.09368		mg/Kg		94	70 - 130		
m-Xylene & p-Xylene			0.200	0.1856		mg/Kg		93	70 - 130		
o-Xylene			0.100	0.1015		mg/Kg		101	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*151*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*

Lab Sample ID: LCSD 880-64995/2-A
Matrix: Solid
Analysis Batch: 65272

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64995

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09930		mg/Kg		99	70 - 130	12	35
Toluene			0.100	0.1027		mg/Kg		103	70 - 130	8	35
Ethylbenzene			0.100	0.09376		mg/Kg		94	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.2027		mg/Kg		101	70 - 130	9	35
o-Xylene			0.100	0.1070		mg/Kg		107	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*158*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*

Lab Sample ID: 880-34566-A-41-D MS
Matrix: Solid
Analysis Batch: 65272

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 64995

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0998	0.1024		mg/Kg		102	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 18 Twin Wells Ranch East Satellite

Job ID: 890-5467-1
SDG: 03C1558144

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

Lab Sample ID: 880-34566-A-41-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 65272 — **Prep Batch: 64995**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Toluene	<0.00200	U	0.0998	0.1030		mg/Kg		103	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.1004		mg/Kg		101	70 - 130
m-Xylene & p-Xylene	<0.00400	U	0.200	0.1890		mg/Kg		95	70 - 130
o-Xylene	<0.00200	U	0.0998	0.1054		mg/Kg		106	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*193*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 880-34566-A-41-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 65272 — **Prep Batch: 64995**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.07188		mg/Kg		72	70 - 130	35	35
Toluene	<0.00200	U	0.0996	0.08787		mg/Kg		88	70 - 130	16	35
Ethylbenzene	<0.00200	U	0.0996	0.07988		mg/Kg		80	70 - 130	23	35
m-Xylene & p-Xylene	<0.00400	U	0.199	0.1515		mg/Kg		76	70 - 130	22	35
o-Xylene	<0.00200	U	0.0996	0.08542		mg/Kg		86	70 - 130	21	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*149*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*

Lab Sample ID: MB 880-64997/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 65272 — **Prep Batch: 64997**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/18/23 15:11	10/21/23 17:13	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/18/23 15:11	10/21/23 17:13	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/18/23 15:11	10/21/23 17:13	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/18/23 15:11	10/21/23 17:13	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/18/23 15:11	10/21/23 17:13	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/18/23 15:11	10/21/23 17:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*10/18/23 15:11*	*10/21/23 17:13*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*10/18/23 15:11*	*10/21/23 17:13*	*1*

QC Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 18 Twin Wells Ranch East Satellite

Job ID: 890-5467-1
SDG: 03C1558144

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

Lab Sample ID: MB 880-65061/1-A
Matrix: Solid
Analysis Batch: 65020

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 65061

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		10/19/23 14:03	10/19/23 19:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/19/23 14:03	10/19/23 19:30	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/19/23 14:03	10/19/23 19:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*136*	*S1+*	*70 - 130*	*10/19/23 14:03*	*10/19/23 19:30*	*1*
o-Terphenyl	*146*	*S1+*	*70 - 130*	*10/19/23 14:03*	*10/19/23 19:30*	*1*

Lab Sample ID: LCS 880-65061/2-A
Matrix: Solid
Analysis Batch: 65020

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 65061

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	927.9		mg/Kg		93	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	956.5		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*83*		*70 - 130*
o-Terphenyl	*82*		*70 - 130*

Lab Sample ID: LCSD 880-65061/3-A
Matrix: Solid
Analysis Batch: 65020

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 65061

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	861.5		mg/Kg		86	70 - 130	7	20
Diesel Range Organics (Over C10-C28)			1000	851.2		mg/Kg		85	70 - 130	12	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*82*		*70 - 130*
o-Terphenyl	*83*		*70 - 130*

Lab Sample ID: 890-5466-A-4-D MS
Matrix: Solid
Analysis Batch: 65020

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 65061

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	991	1140		mg/Kg		112	70 - 130		
Diesel Range Organics (Over C10-C28)	232	F1	991	738.9	F1	mg/Kg		51	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 18 Twin Wells Ranch East Satellite

Job ID: 890-5467-1
SDG: 03C1558144

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

Lab Sample ID: 890-5466-A-4-D MS
Matrix: Solid
Analysis Batch: 65020

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 65061

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	93		70 - 130

Lab Sample ID: 890-5466-A-4-E MSD
Matrix: Solid
Analysis Batch: 65020

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 65061

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	991	1153		mg/Kg		113	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	232	F1	991	741.5	F1	mg/Kg		51	70 - 130	0	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	92		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-64941/1-A
Matrix: Solid
Analysis Batch: 65005

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			10/19/23 00:24	1

Lab Sample ID: LCS 880-64941/2-A
Matrix: Solid
Analysis Batch: 65005

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	250.3		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-64941/3-A
Matrix: Solid
Analysis Batch: 65005

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	251.6		mg/Kg		101	90 - 110	1	20

Lab Sample ID: 880-34517-A-1-C MS
Matrix: Solid
Analysis Batch: 65005

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	132		251	365.1		mg/Kg		93	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: Poker Lake Unit 18 Twin Wells Ranch East Satellite

Job ID: 890-5467-1
SDG: 03C1558144

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-34517-A-1-D MSD
Matrix: Solid
Analysis Batch: 65005

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	132		251	365.9		mg/Kg		93	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Poker Lake Unit 18 Twin Wells Ranch East Satellite

Job ID: 890-5467-1
SDG: 03C1558144

GC VOA

Prep Batch: 64995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5467-1	BH09	Total/NA	Solid	5035	
890-5467-2	BH10	Total/NA	Solid	5035	
MB 880-64995/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-64995/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-64995/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-34566-A-41-D MS	Matrix Spike	Total/NA	Solid	5035	
880-34566-A-41-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 64997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-64997/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 65272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5467-1	BH09	Total/NA	Solid	8021B	64995
890-5467-2	BH10	Total/NA	Solid	8021B	64995
MB 880-64995/5-A	Method Blank	Total/NA	Solid	8021B	64995
MB 880-64997/5-A	Method Blank	Total/NA	Solid	8021B	64997
LCS 880-64995/1-A	Lab Control Sample	Total/NA	Solid	8021B	64995
LCSD 880-64995/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	64995
880-34566-A-41-D MS	Matrix Spike	Total/NA	Solid	8021B	64995
880-34566-A-41-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	64995

Analysis Batch: 65445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5467-1	BH09	Total/NA	Solid	Total BTEX	
890-5467-2	BH10	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 65020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5467-1	BH09	Total/NA	Solid	8015B NM	65061
890-5467-2	BH10	Total/NA	Solid	8015B NM	65061
MB 880-65061/1-A	Method Blank	Total/NA	Solid	8015B NM	65061
LCS 880-65061/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	65061
LCSD 880-65061/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	65061
890-5466-A-4-D MS	Matrix Spike	Total/NA	Solid	8015B NM	65061
890-5466-A-4-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	65061

Prep Batch: 65061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5467-1	BH09	Total/NA	Solid	8015NM Prep	
890-5467-2	BH10	Total/NA	Solid	8015NM Prep	
MB 880-65061/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-65061/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-65061/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5466-A-4-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5466-A-4-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Poker Lake Unit 18 Twin Wells Ranch East Satellite

Job ID: 890-5467-1
SDG: 03C1558144

GC Semi VOA

Analysis Batch: 65143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5467-1	BH09	Total/NA	Solid	8015 NM	
890-5467-2	BH10	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 64941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5467-1	BH09	Soluble	Solid	DI Leach	
890-5467-2	BH10	Soluble	Solid	DI Leach	
MB 880-64941/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64941/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64941/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-34517-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-34517-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 65005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5467-1	BH09	Soluble	Solid	300.0	64941
890-5467-2	BH10	Soluble	Solid	300.0	64941
MB 880-64941/1-A	Method Blank	Soluble	Solid	300.0	64941
LCS 880-64941/2-A	Lab Control Sample	Soluble	Solid	300.0	64941
LCSD 880-64941/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64941
880-34517-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	64941
880-34517-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	64941

Lab Chronicle

Client: Ensolum
Project/Site: Poker Lake Unit 18 Twin Wells Ranch East Satellite

Job ID: 890-5467-1
SDG: 03C1558144

Client Sample ID: BH09

Lab Sample ID: 890-5467-1
Matrix: Solid
Date Collected: 10/16/23 10:50
Date Received: 10/16/23 12:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	64995	10/18/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65272	10/22/23 16:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			65445	10/22/23 16:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			65143	10/19/23 21:42	SM	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	65061	10/19/23 14:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65020	10/19/23 21:42	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	64941	10/18/23 10:50	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	65005	10/19/23 03:07	CH	EET MID

Client Sample ID: BH10

Lab Sample ID: 890-5467-2
Matrix: Solid
Date Collected: 10/16/23 11:30
Date Received: 10/16/23 12:59

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	64995	10/18/23 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	65272	10/22/23 16:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			65445	10/22/23 16:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			65143	10/19/23 22:05	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	65061	10/19/23 14:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	65020	10/19/23 22:05	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	64941	10/18/23 10:50	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	65005	10/19/23 03:13	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: Poker Lake Unit 18 Twin Wells Ranch East Satellite

Job ID: 890-5467-1
SDG: 03C1558144

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Ensolum
Project/Site: Poker Lake Unit 18 Twin Wells Ranch East Satellite

Job ID: 890-5467-1
SDG: 03C1558144

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Poker Lake Unit 18 Twin Wells Ranch East Satellite

Job ID: 890-5467-1
SDG: 03C1558144

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5467-1	BH09	Solid	10/16/23 10:50	10/16/23 12:59	1'
890-5467-2	BH10	Solid	10/16/23 11:30	10/16/23 12:59	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:	Ashley Giovengo	Bill to: (if different)	Garrett Green
Company Name:	Ensorum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	575-988-0055 Email:	Garrett.Green@ExxonMobil.com	

Work Order Comments

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

Project Name:	Poker Lake Unit 18 Twin Wells East Satellite	Turn Around	
Project Number:	03C1558144	☒ Routine ☐ Rush	
Project Location:	32.20635 -103.81209	Due Date:	5 days
Sampler's Name:	Mariana O'Dell	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TNM007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	3.4
Total Containers:		Corrected Temperature:	3.2

ANALYSIS REQUEST

Preservative Codes

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

890-5467 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Parameters: Chlorides	TPH	BTEX
BH09	S	10/16/23	10:50	1'	G	1	X	X	X
BH10	S	10/16/23	11:30	1'	G	1	X	X	X

Sample Comments

Incident #:
NAPP2230551957
Cost center
211103 1001
Ashley Giovengo
agiovengo@ensorum.com

MO

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			10/16 1259			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 11/10/2023 1:29:49 PM

Released to Imaging: 2/29/2024 4:12:50 PM

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-1649 1
Client Contact: Shipping/Receiving	Phone.	E-Mail: Jessica Kramer@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-5467-1
Address: 1211 W Florida Ave	Due Date Requested: 10/20/2023			
City: Midland	TAT Requested (days):			
State Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: POKER LAKE TWIN WELLS RANCH UNIT 18	Project #: 89000093			
Site	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8016MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/6036FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
BH09 (890-5467-1)	10/16/23	10 50 Mountain		Solid			X	X	X	X	X	1	
BH10 (890-5467-2)	10/16/23	11 30 Mountain		Solid			X	X	X	X	X	1	

Note Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC

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

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time:	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks

Ver 06/08/2021

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10/24/2023
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Released to Imaging: 2/29/2024 4:12:50 PM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5467-1
SDG Number: 03C1558144

Login Number: 5467
List Number: 1
Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5467-1
SDG Number: 03C1558144

Login Number: 5467
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 10/18/23 12:44 PM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 11/9/2023 4:45:07 PM Revision 1

JOB DESCRIPTION

PLU 18 TWIN WELLS RANCH EAST SATELLITE
SDG NUMBER 03C1558144

JOB NUMBER

890-5211-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

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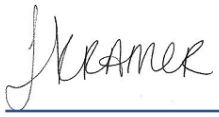
Eurofins Carlsbad

Job Notes

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

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

Authorization



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Revision 1

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

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Laboratory Job ID: 890-5211-1
SDG: 03C1558144

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Definitions/Glossary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, 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: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Job ID: 890-5211-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5211-1

REVISION

The report being provided is a revision of the original report sent on 9/13/2023. The report (revision 1) is being revised due to Per client email, requesting sample ID correction.

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

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

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

Receipt
The samples were received on 9/6/2023 4:33 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-62082 and analytical batch 880-62040 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (890-5210-A-1-C) and (880-32833-A-8-A MB). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-62070 and analytical batch 880-62115 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-62070 and analytical batch 880-62115 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: BH01B (890-5211-4), BH02 (890-5211-5) and BH04 (890-5211-9). 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: (MB 880-62041/5-A). Evidence of matrix interferences is not obvious.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-62105 and analytical batch 880-62028 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: PH05B (890-5211-1), (890-5212-A-1-B), (890-5212-A-1-C MS) and (890-5212-A-1-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Case Narrative

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Job ID: 890-5211-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BH01 (890-5211-3), BH01B (890-5211-4), BH02 (890-5211-5), BH03 (890-5211-7), BH03A (890-5211-8), BH04 (890-5211-9), BH04A (890-5211-10), SS09 (890-5211-11) and SS10 (890-5211-12). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-62105 and analytical batch 880-62028 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-62151 and analytical batch 880-62323 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: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Client Sample ID: PH05B

Date Collected: 09/06/23 09:05
Date Received: 09/06/23 16:33
Sample Depth: 5

Lab Sample ID: 890-5211-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/08/23 10:24	09/10/23 01:50	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/08/23 10:24	09/10/23 01:50	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/08/23 10:24	09/10/23 01:50	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/08/23 10:24	09/10/23 01:50	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/08/23 10:24	09/10/23 01:50	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/08/23 10:24	09/10/23 01:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*09/08/23 10:24*	*09/10/23 01:50*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*09/08/23 10:24*	*09/10/23 01:50*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/11/23 13:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			09/11/23 10:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		09/08/23 15:26	09/08/23 23:58	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		09/08/23 15:26	09/08/23 23:58	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		09/08/23 15:26	09/08/23 23:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*140*	*S1+*	*70 - 130*	*09/08/23 15:26*	*09/08/23 23:58*	*1*
o-Terphenyl	*152*	*S1+*	*70 - 130*	*09/08/23 15:26*	*09/08/23 23:58*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**99.1**		4.96		mg/Kg			09/12/23 20:23	1

Client Sample ID: PH06B

Date Collected: 09/06/23 09:25
Date Received: 09/06/23 16:33
Sample Depth: 5

Lab Sample ID: 890-5211-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/08/23 10:24	09/10/23 02:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/08/23 10:24	09/10/23 02:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/08/23 10:24	09/10/23 02:11	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/08/23 10:24	09/10/23 02:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/08/23 10:24	09/10/23 02:11	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/08/23 10:24	09/10/23 02:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*09/08/23 10:24*	*09/10/23 02:11*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Client Sample ID: PH06B

Date Collected: 09/06/23 09:25
Date Received: 09/06/23 16:33
Sample Depth: 5

Lab Sample ID: 890-5211-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*09/08/23 10:24*	*09/10/23 02:11*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			09/11/23 13:07	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3	mg/Kg			09/11/23 10:03	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3	mg/Kg		09/08/23 15:26	09/09/23 00:20	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3	mg/Kg		09/08/23 15:26	09/09/23 00:20	1
Oil Range Organics (Over C28-C36)	<50.3	U	50.3	mg/Kg		09/08/23 15:26	09/09/23 00:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*09/08/23 15:26*	*09/09/23 00:20*	*1*
o-Terphenyl	*128*		*70 - 130*	*09/08/23 15:26*	*09/09/23 00:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**145**		4.96	mg/Kg			09/12/23 20:29	1

Client Sample ID: BH01

Date Collected: 09/06/23 10:30
Date Received: 09/06/23 16:33
Sample Depth: 0.5

Lab Sample ID: 890-5211-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		09/08/23 10:24	09/10/23 02:31	1
Toluene	<0.00201	U	0.00201	mg/Kg		09/08/23 10:24	09/10/23 02:31	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		09/08/23 10:24	09/10/23 02:31	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		09/08/23 10:24	09/10/23 02:31	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		09/08/23 10:24	09/10/23 02:31	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		09/08/23 10:24	09/10/23 02:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*09/08/23 10:24*	*09/10/23 02:31*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*09/08/23 10:24*	*09/10/23 02:31*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/11/23 13:07	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2	mg/Kg			09/11/23 10:03	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Client Sample ID: BH01

Date Collected: 09/06/23 10:30
Date Received: 09/06/23 16:33
Sample Depth: 0.5

Lab Sample ID: 890-5211-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		09/08/23 15:26	09/09/23 00:43	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		09/08/23 15:26	09/09/23 00:43	1
Oil Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		09/08/23 15:26	09/09/23 00:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*137*	*S1+*	*70 - 130*	*09/08/23 15:26*	*09/09/23 00:43*	*1*
o-Terphenyl	*148*	*S1+*	*70 - 130*	*09/08/23 15:26*	*09/09/23 00:43*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4190**	**F1**	25.0		mg/Kg			09/12/23 20:36	5

Client Sample ID: BH01B

Date Collected: 09/06/23 10:55
Date Received: 09/06/23 16:33
Sample Depth: 5

Lab Sample ID: 890-5211-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/08/23 10:24	09/10/23 02:51	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/08/23 10:24	09/10/23 02:51	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/08/23 10:24	09/10/23 02:51	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		09/08/23 10:24	09/10/23 02:51	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/08/23 10:24	09/10/23 02:51	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		09/08/23 10:24	09/10/23 02:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*09/08/23 10:24*	*09/10/23 02:51*	*1*
1,4-Difluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*09/08/23 10:24*	*09/10/23 02:51*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			09/11/23 13:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			09/11/23 10:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		09/08/23 15:26	09/09/23 01:06	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		09/08/23 15:26	09/09/23 01:06	1
Oil Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		09/08/23 15:26	09/09/23 01:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*145*	*S1+*	*70 - 130*	*09/08/23 15:26*	*09/09/23 01:06*	*1*
o-Terphenyl	*159*	*S1+*	*70 - 130*	*09/08/23 15:26*	*09/09/23 01:06*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Client Sample ID: BH01B
Date Collected: 09/06/23 10:55
Date Received: 09/06/23 16:33
Sample Depth: 5

Lab Sample ID: 890-5211-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	174		5.02		mg/Kg			09/12/23 20:56	1

Client Sample ID: BH02
Date Collected: 09/06/23 13:05
Date Received: 09/06/23 16:33
Sample Depth: 0.5

Lab Sample ID: 890-5211-5
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/08/23 10:24	09/10/23 03:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/08/23 10:24	09/10/23 03:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/08/23 10:24	09/10/23 03:12	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/08/23 10:24	09/10/23 03:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/08/23 10:24	09/10/23 03:12	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/08/23 10:24	09/10/23 03:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*09/08/23 10:24*	*09/10/23 03:12*	*1*
1,4-Difluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*09/08/23 10:24*	*09/10/23 03:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/11/23 13:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/11/23 10:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/08/23 15:26	09/09/23 01:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/08/23 15:26	09/09/23 01:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/08/23 15:26	09/09/23 01:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*136*	*S1+*	*70 - 130*	*09/08/23 15:26*	*09/09/23 01:28*	*1*
o-Terphenyl	*147*	*S1+*	*70 - 130*	*09/08/23 15:26*	*09/09/23 01:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	379		4.99		mg/Kg			09/12/23 21:02	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Client Sample ID: BH02A
Date Collected: 09/06/23 13:15
Date Received: 09/06/23 16:33
Sample Depth: 2

Lab Sample ID: 890-5211-6
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/08/23 10:24	09/10/23 03:32	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/08/23 10:24	09/10/23 03:32	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/08/23 10:24	09/10/23 03:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/08/23 10:24	09/10/23 03:32	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/08/23 10:24	09/10/23 03:32	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/08/23 10:24	09/10/23 03:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*09/08/23 10:24*	*09/10/23 03:32*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*09/08/23 10:24*	*09/10/23 03:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/11/23 13:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			09/11/23 10:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		09/08/23 15:26	09/09/23 01:50	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		09/08/23 15:26	09/09/23 01:50	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		09/08/23 15:26	09/09/23 01:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*09/08/23 15:26*	*09/09/23 01:50*	*1*
o-Terphenyl	*130*		*70 - 130*	*09/08/23 15:26*	*09/09/23 01:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**236**		4.97		mg/Kg			09/12/23 21:22	1

Client Sample ID: BH03
Date Collected: 09/06/23 13:50
Date Received: 09/06/23 16:33
Sample Depth: 0.5

Lab Sample ID: 890-5211-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/08/23 10:24	09/10/23 03:53	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/08/23 10:24	09/10/23 03:53	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/08/23 10:24	09/10/23 03:53	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/08/23 10:24	09/10/23 03:53	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/08/23 10:24	09/10/23 03:53	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/08/23 10:24	09/10/23 03:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*09/08/23 10:24*	*09/10/23 03:53*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Client Sample ID: BH03
Date Collected: 09/06/23 13:50
Date Received: 09/06/23 16:33
Sample Depth: 0.5

Lab Sample ID: 890-5211-7
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*09/08/23 10:24*	*09/10/23 03:53*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/11/23 13:07	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			09/11/23 10:03	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		09/08/23 15:26	09/09/23 02:35	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		09/08/23 15:26	09/09/23 02:35	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		09/08/23 15:26	09/09/23 02:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*123*		*70 - 130*	*09/08/23 15:26*	*09/09/23 02:35*	*1*
o-Terphenyl	*133*	*S1+*	*70 - 130*	*09/08/23 15:26*	*09/09/23 02:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1170**		4.97	mg/Kg			09/12/23 21:29	1

Client Sample ID: BH03A
Date Collected: 09/06/23 14:00
Date Received: 09/06/23 16:33
Sample Depth: 2

Lab Sample ID: 890-5211-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		09/08/23 10:24	09/10/23 04:13	1
Toluene	<0.00202	U	0.00202	mg/Kg		09/08/23 10:24	09/10/23 04:13	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		09/08/23 10:24	09/10/23 04:13	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		09/08/23 10:24	09/10/23 04:13	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		09/08/23 10:24	09/10/23 04:13	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		09/08/23 10:24	09/10/23 04:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*09/08/23 10:24*	*09/10/23 04:13*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*09/08/23 10:24*	*09/10/23 04:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			09/11/23 13:07	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			09/11/23 10:03	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Client Sample ID: BH03A
Date Collected: 09/06/23 14:00
Date Received: 09/06/23 16:33
Sample Depth: 2

Lab Sample ID: 890-5211-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/08/23 15:26	09/09/23 02:58	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/08/23 15:26	09/09/23 02:58	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/08/23 15:26	09/09/23 02:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*128*		*70 - 130*	*09/08/23 15:26*	*09/09/23 02:58*	*1*
o-Terphenyl	*141*	*S1+*	*70 - 130*	*09/08/23 15:26*	*09/09/23 02:58*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**155**		4.95		mg/Kg			09/12/23 21:36	1

Client Sample ID: BH04
Date Collected: 09/06/23 14:10
Date Received: 09/06/23 16:33
Sample Depth: 0.5

Lab Sample ID: 890-5211-9
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/08/23 10:24	09/10/23 04:33	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/08/23 10:24	09/10/23 04:33	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/08/23 10:24	09/10/23 04:33	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		09/08/23 10:24	09/10/23 04:33	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/08/23 10:24	09/10/23 04:33	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		09/08/23 10:24	09/10/23 04:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*09/08/23 10:24*	*09/10/23 04:33*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*09/08/23 10:24*	*09/10/23 04:33*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			09/11/23 13:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			09/11/23 10:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		09/08/23 15:26	09/09/23 03:21	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		09/08/23 15:26	09/09/23 03:21	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		09/08/23 15:26	09/09/23 03:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*133*	*S1+*	*70 - 130*	*09/08/23 15:26*	*09/09/23 03:21*	*1*
o-Terphenyl	*144*	*S1+*	*70 - 130*	*09/08/23 15:26*	*09/09/23 03:21*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Client Sample ID: BH04

Date Collected: 09/06/23 14:10
Date Received: 09/06/23 16:33
Sample Depth: 0.5

Lab Sample ID: 890-5211-9
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	840		5.00		mg/Kg			09/12/23 21:42	1

Client Sample ID: BH04A

Date Collected: 09/06/23 14:20
Date Received: 09/06/23 16:33
Sample Depth: 2

Lab Sample ID: 890-5211-10
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/08/23 10:24	09/10/23 04:54	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/08/23 10:24	09/10/23 04:54	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/08/23 10:24	09/10/23 04:54	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/08/23 10:24	09/10/23 04:54	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/08/23 10:24	09/10/23 04:54	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/08/23 10:24	09/10/23 04:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*09/08/23 10:24*	*09/10/23 04:54*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*09/08/23 10:24*	*09/10/23 04:54*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/11/23 13:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			09/11/23 10:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		09/08/23 15:26	09/09/23 03:42	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		09/08/23 15:26	09/09/23 03:42	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		09/08/23 15:26	09/09/23 03:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*133*	*S1+*	*70 - 130*	*09/08/23 15:26*	*09/09/23 03:42*	*1*
o-Terphenyl	*142*	*S1+*	*70 - 130*	*09/08/23 15:26*	*09/09/23 03:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	165		4.96		mg/Kg			09/12/23 21:49	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Client Sample ID: SS09

Date Collected: 09/06/23 12:15
Date Received: 09/06/23 16:33
Sample Depth: 0.5

Lab Sample ID: 890-5211-11
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/08/23 11:01	09/09/23 01:06	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/08/23 11:01	09/09/23 01:06	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/08/23 11:01	09/09/23 01:06	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		09/08/23 11:01	09/09/23 01:06	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/08/23 11:01	09/09/23 01:06	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		09/08/23 11:01	09/09/23 01:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*09/08/23 11:01*	*09/09/23 01:06*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*09/08/23 11:01*	*09/09/23 01:06*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			09/11/23 13:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			09/11/23 10:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		09/08/23 15:26	09/09/23 04:04	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		09/08/23 15:26	09/09/23 04:04	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		09/08/23 15:26	09/09/23 04:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*142*	*S1+*	*70 - 130*	*09/08/23 15:26*	*09/09/23 04:04*	*1*
o-Terphenyl	*151*	*S1+*	*70 - 130*	*09/08/23 15:26*	*09/09/23 04:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**767**		5.05		mg/Kg			09/12/23 21:56	1

Client Sample ID: SS10

Date Collected: 09/06/23 12:30
Date Received: 09/06/23 16:33
Sample Depth: 0.5

Lab Sample ID: 890-5211-12
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/08/23 11:01	09/09/23 01:26	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/08/23 11:01	09/09/23 01:26	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/08/23 11:01	09/09/23 01:26	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/08/23 11:01	09/09/23 01:26	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/08/23 11:01	09/09/23 01:26	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/08/23 11:01	09/09/23 01:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*09/08/23 11:01*	*09/09/23 01:26*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Client Sample ID: SS10

Date Collected: 09/06/23 12:30
Date Received: 09/06/23 16:33
Sample Depth: 0.5

Lab Sample ID: 890-5211-12

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*09/08/23 11:01*	*09/09/23 01:26*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/11/23 13:03	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			09/11/23 10:03	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		09/08/23 15:26	09/09/23 04:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		09/08/23 15:26	09/09/23 04:25	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/08/23 15:26	09/09/23 04:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*09/08/23 15:26*	*09/09/23 04:25*	*1*
o-Terphenyl	*131*	*S1+*	*70 - 130*	*09/08/23 15:26*	*09/09/23 04:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**102**		4.97	mg/Kg			09/12/23 22:02	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-32833-A-8-A MB	Method Blank	65 S1-	101
880-33026-A-10-B MS	Matrix Spike	122	94
880-33026-A-10-C MSD	Matrix Spike Duplicate	116	107
890-5210-A-1-A MS	Matrix Spike	113	113
890-5210-A-1-B MSD	Matrix Spike Duplicate	110	96
890-5211-1	PH05B	76	92
890-5211-2	PH06B	82	74
890-5211-3	BH01	83	75
890-5211-4	BH01B	86	69 S1-
890-5211-5	BH02	84	69 S1-
890-5211-6	BH02A	81	79
890-5211-7	BH03	82	72
890-5211-8	BH03A	80	75
890-5211-9	BH04	131 S1+	76
890-5211-10	BH04A	80	75
890-5211-11	SS09	92	87
890-5211-12	SS10	87	80
LCS 880-62070/1-A	Lab Control Sample	112	113
LCS 880-62082/1-A	Lab Control Sample	122	111
LCSD 880-62070/2-A	Lab Control Sample Dup	112	109
LCSD 880-62082/2-A	Lab Control Sample Dup	110	113
MB 880-62070/5-A	Method Blank	65 S1-	99
MB 880-62082/5-A	Method Blank	62 S1-	99

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-5211-1	PH05B	140 S1+	152 S1+
890-5211-2	PH06B	119	128
890-5211-3	BH01	137 S1+	148 S1+
890-5211-4	BH01B	145 S1+	159 S1+
890-5211-5	BH02	136 S1+	147 S1+
890-5211-6	BH02A	122	130
890-5211-7	BH03	123	133 S1+
890-5211-8	BH03A	128	141 S1+
890-5211-9	BH04	133 S1+	144 S1+
890-5211-10	BH04A	133 S1+	142 S1+
890-5211-11	SS09	142 S1+	151 S1+
890-5211-12	SS10	123	131 S1+
890-5212-A-1-C MS	Matrix Spike	134 S1+	133 S1+
890-5212-A-1-D MSD	Matrix Spike Duplicate	133 S1+	130
LCS 880-62105/2-A	Lab Control Sample	91	103
LCSD 880-62105/3-A	Lab Control Sample Dup	89	101

Surrogate Summary

Client: Ensolum Job ID: 890-5211-1
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE SDG: 03C1558144

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)								
MB 880-62105/1-A	Method Blank	145 S1+	161 S1+								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: 880-32833-A-8-A MB
Matrix: Solid
Analysis Batch: 62040

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62041

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/08/23 08:55	09/08/23 17:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/08/23 08:55	09/08/23 17:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/08/23 08:55	09/08/23 17:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/08/23 08:55	09/08/23 17:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/08/23 08:55	09/08/23 17:11	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/08/23 08:55	09/08/23 17:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*65*	*S1-*	*70 - 130*	*09/08/23 08:55*	*09/08/23 17:11*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*09/08/23 08:55*	*09/08/23 17:11*	*1*

Lab Sample ID: MB 880-62070/5-A
Matrix: Solid
Analysis Batch: 62115

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62070

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/08/23 10:24	09/09/23 21:02	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/08/23 10:24	09/09/23 21:02	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/08/23 10:24	09/09/23 21:02	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/08/23 10:24	09/09/23 21:02	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/08/23 10:24	09/09/23 21:02	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/08/23 10:24	09/09/23 21:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*65*	*S1-*	*70 - 130*	*09/08/23 10:24*	*09/09/23 21:02*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*09/08/23 10:24*	*09/09/23 21:02*	*1*

Lab Sample ID: LCS 880-62070/1-A
Matrix: Solid
Analysis Batch: 62115

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62070

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.07799		mg/Kg		78	70 - 130		
Toluene			0.100	0.08423		mg/Kg		84	70 - 130		
Ethylbenzene			0.100	0.08507		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			0.200	0.1799		mg/Kg		90	70 - 130		
o-Xylene			0.100	0.09244		mg/Kg		92	70 - 130		

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

Lab Sample ID: LCSD 880-62070/2-A
Matrix: Solid
Analysis Batch: 62115

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62070

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08469		mg/Kg		85	70 - 130	8	35

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QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

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

Lab Sample ID: LCSD 880-62070/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 62115 — **Prep Batch: 62070**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09119		mg/Kg		91	70 - 130	8	35
Ethylbenzene			0.100	0.09064		mg/Kg		91	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1924		mg/Kg		96	70 - 130	7	35
o-Xylene			0.100	0.09812		mg/Kg		98	70 - 130	6	35

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

Lab Sample ID: 880-33026-A-10-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 62115 — **Prep Batch: 62070**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198	U F1	0.0998	0.07570		mg/Kg		76	70 - 130
Toluene	<0.00198	U F1 F2	0.0998	0.05216	F1	mg/Kg		52	70 - 130
Ethylbenzene	<0.00198	U F1 F2	0.0998	0.05039	F1	mg/Kg		50	70 - 130
m-Xylene & p-Xylene	<0.00396	U F1 F2	0.200	0.1071	F1	mg/Kg		54	70 - 130
o-Xylene	<0.00198	U F1	0.0998	0.06311	F1	mg/Kg		63	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 880-33026-A-10-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 62115 — **Prep Batch: 62070**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U F1	0.100	0.06113	F1	mg/Kg		61	70 - 130	21	35
Toluene	<0.00198	U F1 F2	0.100	0.02942	F1 F2	mg/Kg		29	70 - 130	56	35
Ethylbenzene	<0.00198	U F1 F2	0.100	0.03303	F1 F2	mg/Kg		33	70 - 130	42	35
m-Xylene & p-Xylene	<0.00396	U F1 F2	0.200	0.06880	F1 F2	mg/Kg		34	70 - 130	44	35
o-Xylene	<0.00198	U F1	0.100	0.04659	F1	mg/Kg		46	70 - 130	30	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: MB 880-62082/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 62040 — **Prep Batch: 62082**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/08/23 11:01	09/08/23 22:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/08/23 11:01	09/08/23 22:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/08/23 11:01	09/08/23 22:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/08/23 11:01	09/08/23 22:40	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

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

Lab Sample ID: MB 880-62082/5-A
Matrix: Solid
Analysis Batch: 62040

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62082

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/08/23 11:01	09/08/23 22:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/08/23 11:01	09/08/23 22:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*62*	*S1-*	*70 - 130*	*09/08/23 11:01*	*09/08/23 22:40*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*09/08/23 11:01*	*09/08/23 22:40*	*1*

Lab Sample ID: LCS 880-62082/1-A
Matrix: Solid
Analysis Batch: 62040

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62082

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09941		mg/Kg		99	70 - 130		
Toluene			0.100	0.1014		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.1016		mg/Kg		102	70 - 130		
m-Xylene & p-Xylene			0.200	0.2210		mg/Kg		111	70 - 130		
o-Xylene			0.100	0.1157		mg/Kg		116	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: LCSD 880-62082/2-A
Matrix: Solid
Analysis Batch: 62040

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62082

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09561		mg/Kg		96	70 - 130	4	35
Toluene			0.100	0.09614		mg/Kg		96	70 - 130	5	35
Ethylbenzene			0.100	0.09614		mg/Kg		96	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.2067		mg/Kg		103	70 - 130	7	35
o-Xylene			0.100	0.1039		mg/Kg		104	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: 890-5210-A-1-A MS
Matrix: Solid
Analysis Batch: 62040

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62082

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0998	0.08017		mg/Kg		80	70 - 130		
Toluene	<0.00199	U	0.0998	0.08157		mg/Kg		82	70 - 130		
Ethylbenzene	<0.00199	U	0.0998	0.08150		mg/Kg		82	70 - 130		
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1714		mg/Kg		86	70 - 130		
o-Xylene	<0.00199	U	0.0998	0.08588		mg/Kg		86	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

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

Lab Sample ID: 890-5210-A-1-A MS
Matrix: Solid
Analysis Batch: 62040

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62082

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

Lab Sample ID: 890-5210-A-1-B MSD
Matrix: Solid
Analysis Batch: 62040

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 62082

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	0.08514		mg/Kg		85	70 - 130	6	35
Toluene	<0.00199	U	0.100	0.08931		mg/Kg		89	70 - 130	9	35
Ethylbenzene	<0.00199	U	0.100	0.08778		mg/Kg		88	70 - 130	7	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1806		mg/Kg		90	70 - 130	5	35
o-Xylene	<0.00199	U	0.100	0.09035		mg/Kg		90	70 - 130	5	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

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

Lab Sample ID: MB 880-62105/1-A
Matrix: Solid
Analysis Batch: 62028

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62105

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/08/23 15:26	09/08/23 20:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/08/23 15:26	09/08/23 20:37	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/08/23 15:26	09/08/23 20:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	145	S1+	70 - 130	09/08/23 15:26	09/08/23 20:37	1
o-Terphenyl	161	S1+	70 - 130	09/08/23 15:26	09/08/23 20:37	1

Lab Sample ID: LCS 880-62105/2-A
Matrix: Solid
Analysis Batch: 62028

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62105

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1157		mg/Kg		116	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1011		mg/Kg		101	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	103		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

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

Lab Sample ID: LCSD 880-62105/3-A
Matrix: Solid
Analysis Batch: 62028

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 62105

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1080		mg/Kg		108	70 - 130	7	20
Diesel Range Organics (Over C10-C28)			1000	947.1		mg/Kg		95	70 - 130	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*101*		*70 - 130*

Lab Sample ID: 890-5212-A-1-C MS
Matrix: Solid
Analysis Batch: 62028

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62105

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	1010	971.0		mg/Kg		95	70 - 130
Diesel Range Organics (Over C10-C28)	63.7		1010	1106		mg/Kg		104	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*134*	*S1+*	*70 - 130*
o-Terphenyl	*133*	*S1+*	*70 - 130*

Lab Sample ID: 890-5212-A-1-D MSD
Matrix: Solid
Analysis Batch: 62028

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 62105

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	1010	956.7		mg/Kg		94	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	63.7		1010	1099		mg/Kg		103	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*133*	*S1+*	*70 - 130*
o-Terphenyl	*130*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-62151/1-A
Matrix: Solid
Analysis Batch: 62323

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/12/23 18:43	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-62151/2-A
Matrix: Solid
Analysis Batch: 62323

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	241.1		mg/Kg		96	90 - 110		

Lab Sample ID: LCSD 880-62151/3-A
Matrix: Solid
Analysis Batch: 62323

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	239.6		mg/Kg		96	90 - 110	1	20

Lab Sample ID: 890-5211-3 MS
Matrix: Solid
Analysis Batch: 62323

Client Sample ID: BH01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	4190	F1	1250	5310		mg/Kg		90	90 - 110		

Lab Sample ID: 890-5211-3 MSD
Matrix: Solid
Analysis Batch: 62323

Client Sample ID: BH01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	4190	F1	1250	5307	F1	mg/Kg		89	90 - 110	0	20

Lab Sample ID: MB 880-63342/1-A
Matrix: Solid
Analysis Batch: 63354

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/26/23 21:02	1

Lab Sample ID: LCS 880-63342/2-A
Matrix: Solid
Analysis Batch: 63354

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	245.8		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-63342/3-A
Matrix: Solid
Analysis Batch: 63354

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	246.2		mg/Kg		98	90 - 110	0	20

Lab Sample ID: 880-33640-A-3-B MS
Matrix: Solid
Analysis Batch: 63354

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	1160		2480	3395		mg/Kg		90	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-33640-A-3-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 63354

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1160		2480	3397		mg/Kg		91	90 - 110	0	20

Lab Sample ID: MB 880-63679/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 63680

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/29/23 18:25	1

Lab Sample ID: LCS 880-63679/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 63680

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	247.7		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-63679/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 63680

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	247.9		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 880-33841-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 63680

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	127		251	361.9		mg/Kg		94	90 - 110		

Lab Sample ID: 880-33841-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 63680

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	127		251	361.3		mg/Kg		93	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

GC VOA

Analysis Batch: 62040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5211-11	SS09	Total/NA	Solid	8021B	62082
890-5211-12	SS10	Total/NA	Solid	8021B	62082
880-32833-A-8-A MB	Method Blank	Total/NA	Solid	8021B	62041
MB 880-62082/5-A	Method Blank	Total/NA	Solid	8021B	62082
LCS 880-62082/1-A	Lab Control Sample	Total/NA	Solid	8021B	62082
LCSD 880-62082/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	62082
890-5210-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	62082
890-5210-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	62082

Prep Batch: 62041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-32833-A-8-A MB	Method Blank	Total/NA	Solid	5030B	

Prep Batch: 62070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5211-1	PH05B	Total/NA	Solid	5035	
890-5211-2	PH06B	Total/NA	Solid	5035	
890-5211-3	BH01	Total/NA	Solid	5035	
890-5211-4	BH01B	Total/NA	Solid	5035	
890-5211-5	BH02	Total/NA	Solid	5035	
890-5211-6	BH02A	Total/NA	Solid	5035	
890-5211-7	BH03	Total/NA	Solid	5035	
890-5211-8	BH03A	Total/NA	Solid	5035	
890-5211-9	BH04	Total/NA	Solid	5035	
890-5211-10	BH04A	Total/NA	Solid	5035	
MB 880-62070/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-62070/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-62070/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-33026-A-10-B MS	Matrix Spike	Total/NA	Solid	5035	
880-33026-A-10-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 62082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5211-11	SS09	Total/NA	Solid	5035	
890-5211-12	SS10	Total/NA	Solid	5035	
MB 880-62082/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-62082/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-62082/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5210-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-5210-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 62115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5211-1	PH05B	Total/NA	Solid	8021B	62070
890-5211-2	PH06B	Total/NA	Solid	8021B	62070
890-5211-3	BH01	Total/NA	Solid	8021B	62070
890-5211-4	BH01B	Total/NA	Solid	8021B	62070
890-5211-5	BH02	Total/NA	Solid	8021B	62070
890-5211-6	BH02A	Total/NA	Solid	8021B	62070
890-5211-7	BH03	Total/NA	Solid	8021B	62070
890-5211-8	BH03A	Total/NA	Solid	8021B	62070

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

GC VOA (Continued)

Analysis Batch: 62115 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5211-9	BH04	Total/NA	Solid	8021B	62070
890-5211-10	BH04A	Total/NA	Solid	8021B	62070
MB 880-62070/5-A	Method Blank	Total/NA	Solid	8021B	62070
LCS 880-62070/1-A	Lab Control Sample	Total/NA	Solid	8021B	62070
LCSD 880-62070/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	62070
880-33026-A-10-B MS	Matrix Spike	Total/NA	Solid	8021B	62070
880-33026-A-10-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	62070

Analysis Batch: 62182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5211-1	PH05B	Total/NA	Solid	Total BTEX	
890-5211-2	PH06B	Total/NA	Solid	Total BTEX	
890-5211-3	BH01	Total/NA	Solid	Total BTEX	
890-5211-4	BH01B	Total/NA	Solid	Total BTEX	
890-5211-5	BH02	Total/NA	Solid	Total BTEX	
890-5211-6	BH02A	Total/NA	Solid	Total BTEX	
890-5211-7	BH03	Total/NA	Solid	Total BTEX	
890-5211-8	BH03A	Total/NA	Solid	Total BTEX	
890-5211-9	BH04	Total/NA	Solid	Total BTEX	
890-5211-10	BH04A	Total/NA	Solid	Total BTEX	
890-5211-11	SS09	Total/NA	Solid	Total BTEX	
890-5211-12	SS10	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 62028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5211-1	PH05B	Total/NA	Solid	8015B NM	62105
890-5211-2	PH06B	Total/NA	Solid	8015B NM	62105
890-5211-3	BH01	Total/NA	Solid	8015B NM	62105
890-5211-4	BH01B	Total/NA	Solid	8015B NM	62105
890-5211-5	BH02	Total/NA	Solid	8015B NM	62105
890-5211-6	BH02A	Total/NA	Solid	8015B NM	62105
890-5211-7	BH03	Total/NA	Solid	8015B NM	62105
890-5211-8	BH03A	Total/NA	Solid	8015B NM	62105
890-5211-9	BH04	Total/NA	Solid	8015B NM	62105
890-5211-10	BH04A	Total/NA	Solid	8015B NM	62105
890-5211-11	SS09	Total/NA	Solid	8015B NM	62105
890-5211-12	SS10	Total/NA	Solid	8015B NM	62105
MB 880-62105/1-A	Method Blank	Total/NA	Solid	8015B NM	62105
LCS 880-62105/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	62105
LCSD 880-62105/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	62105
890-5212-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	62105
890-5212-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	62105

Prep Batch: 62105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5211-1	PH05B	Total/NA	Solid	8015NM Prep	
890-5211-2	PH06B	Total/NA	Solid	8015NM Prep	
890-5211-3	BH01	Total/NA	Solid	8015NM Prep	
890-5211-4	BH01B	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

GC Semi VOA (Continued)

Prep Batch: 62105 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5211-5	BH02	Total/NA	Solid	8015NM Prep	
890-5211-6	BH02A	Total/NA	Solid	8015NM Prep	
890-5211-7	BH03	Total/NA	Solid	8015NM Prep	
890-5211-8	BH03A	Total/NA	Solid	8015NM Prep	
890-5211-9	BH04	Total/NA	Solid	8015NM Prep	
890-5211-10	BH04A	Total/NA	Solid	8015NM Prep	
890-5211-11	SS09	Total/NA	Solid	8015NM Prep	
890-5211-12	SS10	Total/NA	Solid	8015NM Prep	
MB 880-62105/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-62105/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-62105/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5212-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5212-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 62148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5211-1	PH05B	Total/NA	Solid	8015 NM	
890-5211-2	PH06B	Total/NA	Solid	8015 NM	
890-5211-3	BH01	Total/NA	Solid	8015 NM	
890-5211-4	BH01B	Total/NA	Solid	8015 NM	
890-5211-5	BH02	Total/NA	Solid	8015 NM	
890-5211-6	BH02A	Total/NA	Solid	8015 NM	
890-5211-7	BH03	Total/NA	Solid	8015 NM	
890-5211-8	BH03A	Total/NA	Solid	8015 NM	
890-5211-9	BH04	Total/NA	Solid	8015 NM	
890-5211-10	BH04A	Total/NA	Solid	8015 NM	
890-5211-11	SS09	Total/NA	Solid	8015 NM	
890-5211-12	SS10	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 62151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5211-1	PH05B	Soluble	Solid	DI Leach	
890-5211-2	PH06B	Soluble	Solid	DI Leach	
890-5211-3	BH01	Soluble	Solid	DI Leach	
890-5211-4	BH01B	Soluble	Solid	DI Leach	
890-5211-5	BH02	Soluble	Solid	DI Leach	
890-5211-6	BH02A	Soluble	Solid	DI Leach	
890-5211-7	BH03	Soluble	Solid	DI Leach	
890-5211-8	BH03A	Soluble	Solid	DI Leach	
890-5211-9	BH04	Soluble	Solid	DI Leach	
890-5211-10	BH04A	Soluble	Solid	DI Leach	
890-5211-11	SS09	Soluble	Solid	DI Leach	
890-5211-12	SS10	Soluble	Solid	DI Leach	
MB 880-62151/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-62151/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-62151/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5211-3 MS	BH01	Soluble	Solid	DI Leach	
890-5211-3 MSD	BH01	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

HPLC/IC

Analysis Batch: 62323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5211-1	PH05B	Soluble	Solid	300.0	62151
890-5211-2	PH06B	Soluble	Solid	300.0	62151
890-5211-3	BH01	Soluble	Solid	300.0	62151
890-5211-4	BH01B	Soluble	Solid	300.0	62151
890-5211-5	BH02	Soluble	Solid	300.0	62151
890-5211-6	BH02A	Soluble	Solid	300.0	62151
890-5211-7	BH03	Soluble	Solid	300.0	62151
890-5211-8	BH03A	Soluble	Solid	300.0	62151
890-5211-9	BH04	Soluble	Solid	300.0	62151
890-5211-10	BH04A	Soluble	Solid	300.0	62151
890-5211-11	SS09	Soluble	Solid	300.0	62151
890-5211-12	SS10	Soluble	Solid	300.0	62151
MB 880-62151/1-A	Method Blank	Soluble	Solid	300.0	62151
LCS 880-62151/2-A	Lab Control Sample	Soluble	Solid	300.0	62151
LCSD 880-62151/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	62151
890-5211-3 MS	BH01	Soluble	Solid	300.0	62151
890-5211-3 MSD	BH01	Soluble	Solid	300.0	62151

Leach Batch: 63342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-63342/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-63342/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-63342/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-33640-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-33640-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 63354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-63342/1-A	Method Blank	Soluble	Solid	300.0	63342
LCS 880-63342/2-A	Lab Control Sample	Soluble	Solid	300.0	63342
LCSD 880-63342/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	63342
880-33640-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	63342
880-33640-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	63342

Leach Batch: 63679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-63679/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-63679/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-63679/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-33841-A-1-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-33841-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 63680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-63679/1-A	Method Blank	Soluble	Solid	300.0	63679
LCS 880-63679/2-A	Lab Control Sample	Soluble	Solid	300.0	63679
LCSD 880-63679/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	63679
880-33841-A-1-D MS	Matrix Spike	Soluble	Solid	300.0	63679
880-33841-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	63679

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Client Sample ID: PH05B
Date Collected: 09/06/23 09:05
Date Received: 09/06/23 16:33

Lab Sample ID: 890-5211-1
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	62070	09/08/23 10:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62115	09/10/23 01:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62182	09/11/23 13:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			62148	09/11/23 10:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	62105	09/08/23 15:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62028	09/08/23 23:58	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	62151	09/11/23 10:13	AG	EET MID
Soluble	Analysis	300.0		1			62323	09/12/23 20:23	CH	EET MID

Client Sample ID: PH06B
Date Collected: 09/06/23 09:25
Date Received: 09/06/23 16:33

Lab Sample ID: 890-5211-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	62070	09/08/23 10:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62115	09/10/23 02:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62182	09/11/23 13:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			62148	09/11/23 10:03	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	62105	09/08/23 15:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62028	09/09/23 00:20	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	62151	09/11/23 10:13	AG	EET MID
Soluble	Analysis	300.0		1			62323	09/12/23 20:29	CH	EET MID

Client Sample ID: BH01
Date Collected: 09/06/23 10:30
Date Received: 09/06/23 16:33

Lab Sample ID: 890-5211-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	62070	09/08/23 10:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62115	09/10/23 02:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62182	09/11/23 13:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			62148	09/11/23 10:03	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	62105	09/08/23 15:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62028	09/09/23 00:43	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	62151	09/11/23 10:13	AG	EET MID
Soluble	Analysis	300.0		5			62323	09/12/23 20:36	CH	EET MID

Client Sample ID: BH01B
Date Collected: 09/06/23 10:55
Date Received: 09/06/23 16:33

Lab Sample ID: 890-5211-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	62070	09/08/23 10:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62115	09/10/23 02:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62182	09/11/23 13:07	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Client Sample ID: BH01B
Date Collected: 09/06/23 10:55
Date Received: 09/06/23 16:33

Lab Sample ID: 890-5211-4
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			62148	09/11/23 10:03	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	62105	09/08/23 15:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62028	09/09/23 01:06	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	62151	09/11/23 10:13	AG	EET MID
Soluble	Analysis	300.0		1			62323	09/12/23 20:56	CH	EET MID

Client Sample ID: BH02
Date Collected: 09/06/23 13:05
Date Received: 09/06/23 16:33

Lab Sample ID: 890-5211-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	62070	09/08/23 10:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62115	09/10/23 03:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62182	09/11/23 13:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			62148	09/11/23 10:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	62105	09/08/23 15:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62028	09/09/23 01:28	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	62151	09/11/23 10:13	AG	EET MID
Soluble	Analysis	300.0		1			62323	09/12/23 21:02	CH	EET MID

Client Sample ID: BH02A
Date Collected: 09/06/23 13:15
Date Received: 09/06/23 16:33

Lab Sample ID: 890-5211-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	62070	09/08/23 10:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62115	09/10/23 03:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62182	09/11/23 13:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			62148	09/11/23 10:03	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	62105	09/08/23 15:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62028	09/09/23 01:50	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	62151	09/11/23 10:13	AG	EET MID
Soluble	Analysis	300.0		1			62323	09/12/23 21:22	CH	EET MID

Client Sample ID: BH03
Date Collected: 09/06/23 13:50
Date Received: 09/06/23 16:33

Lab Sample ID: 890-5211-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	62070	09/08/23 10:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62115	09/10/23 03:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62182	09/11/23 13:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			62148	09/11/23 10:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	62105	09/08/23 15:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62028	09/09/23 02:35	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Client Sample ID: BH03
Date Collected: 09/06/23 13:50
Date Received: 09/06/23 16:33

Lab Sample ID: 890-5211-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	62151	09/11/23 10:13	AG	EET MID
Soluble	Analysis	300.0		1			62323	09/12/23 21:29	CH	EET MID

Client Sample ID: BH03A
Date Collected: 09/06/23 14:00
Date Received: 09/06/23 16:33

Lab Sample ID: 890-5211-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	62070	09/08/23 10:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62115	09/10/23 04:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62182	09/11/23 13:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			62148	09/11/23 10:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	62105	09/08/23 15:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62028	09/09/23 02:58	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	62151	09/11/23 10:13	AG	EET MID
Soluble	Analysis	300.0		1			62323	09/12/23 21:36	CH	EET MID

Client Sample ID: BH04
Date Collected: 09/06/23 14:10
Date Received: 09/06/23 16:33

Lab Sample ID: 890-5211-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	62070	09/08/23 10:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62115	09/10/23 04:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62182	09/11/23 13:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			62148	09/11/23 10:03	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	62105	09/08/23 15:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62028	09/09/23 03:21	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	62151	09/11/23 10:13	AG	EET MID
Soluble	Analysis	300.0		1			62323	09/12/23 21:42	CH	EET MID

Client Sample ID: BH04A
Date Collected: 09/06/23 14:20
Date Received: 09/06/23 16:33

Lab Sample ID: 890-5211-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	62070	09/08/23 10:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62115	09/10/23 04:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62182	09/11/23 13:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			62148	09/11/23 10:03	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	62105	09/08/23 15:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62028	09/09/23 03:42	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	62151	09/11/23 10:13	AG	EET MID
Soluble	Analysis	300.0		1			62323	09/12/23 21:49	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Client Sample ID: SS09

Date Collected: 09/06/23 12:15
Date Received: 09/06/23 16:33

Lab Sample ID: 890-5211-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	62082	09/08/23 11:01	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62040	09/09/23 01:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62182	09/11/23 13:03	SM	EET MID
Total/NA	Analysis	8015 NM		1			62148	09/11/23 10:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	62105	09/08/23 15:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62028	09/09/23 04:04	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	62151	09/11/23 10:13	AG	EET MID
Soluble	Analysis	300.0		1			62323	09/12/23 21:56	CH	EET MID

Client Sample ID: SS10

Date Collected: 09/06/23 12:30
Date Received: 09/06/23 16:33

Lab Sample ID: 890-5211-12
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	62082	09/08/23 11:01	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62040	09/09/23 01:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62182	09/11/23 13:03	SM	EET MID
Total/NA	Analysis	8015 NM		1			62148	09/11/23 10:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	62105	09/08/23 15:26	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62028	09/09/23 04:25	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	62151	09/11/23 10:13	AG	EET MID
Soluble	Analysis	300.0		1			62323	09/12/23 22:02	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: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

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

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH EAST SATELLITE

Job ID: 890-5211-1
SDG: 03C1558144

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5211-1	PH05B	Solid	09/06/23 09:05	09/06/23 16:33	5
890-5211-2	PH06B	Solid	09/06/23 09:25	09/06/23 16:33	5
890-5211-3	BH01	Solid	09/06/23 10:30	09/06/23 16:33	0.5
890-5211-4	BH01B	Solid	09/06/23 10:55	09/06/23 16:33	5
890-5211-5	BH02	Solid	09/06/23 13:05	09/06/23 16:33	0.5
890-5211-6	BH02A	Solid	09/06/23 13:15	09/06/23 16:33	2
890-5211-7	BH03	Solid	09/06/23 13:50	09/06/23 16:33	0.5
890-5211-8	BH03A	Solid	09/06/23 14:00	09/06/23 16:33	2
890-5211-9	BH04	Solid	09/06/23 14:10	09/06/23 16:33	0.5
890-5211-10	BH04A	Solid	09/06/23 14:20	09/06/23 16:33	2
890-5211-11	SS09	Solid	09/06/23 12:15	09/06/23 16:33	0.5
890-5211-12	SS10	Solid	09/06/23 12:30	09/06/23 16:33	0.5

Released to Imaging: 2/29/2024 4:12:50 PM
Received by OCD: 11/10/2023 1:29:49 PM

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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 2

Project Manager:	Ashley Giovengo	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	575-988-0055	Email:	Garrett.Green@ExxonMobil.com

Work Order Comments

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

Project Name:	PLU 18 Two Wells Ranch East Satellite	Turn Around	Pres. Code
Project Number:	03C1558144	☒ Routine ☐ Rush	
Project Location:	32.20035, -103.81299	Due Date: 5 days	
Sampler's Name:	Mariana O'Dell	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	Parameters
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-2.6	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.6	
Total Containers:		Corrected Temperature:	2.8	

ANALYSIS REQUEST

890-5211 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 Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Chlorides	TPH	BTEX	Sample Comments
PH05B	S	9/6/23	9:05	5'	G	1	X	X	X	Incident #:
PH06B			9:25	5'						NAPP2230551957
~~SS04~~ MD BH01			10:30	0.5'						Cost Center:
~~SS04A~~ MD BH01B			10:55	5'						211103 1001
BH02			13:05	0.5'						Ben Belill:
BH02A			13:15	2'						bbelill@ensolum.com
BH03			13:50	0.5'						Ashley Giovengo:
BH03A			14:00	2'						agiovengo@ensolum.com
BH04			14:10	0.5'						
BH04A			14:20	2'						

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	M. O'Dell	Alex	9-6-23 16:33			
2				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s)	COC No: 890-1489 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 2
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-5211-1
Address: 1211 W Florida Ave	Due Date Requested: 9/12/2023			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: PLU 18 TWIN WELLS RANCH EAST SATELLITE	Project #: 89000093			
Site	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8016MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
PH05B (890-5211-1)	9/6/23	09 05 Mountain		Solid			X	X	X	X	X	1	
PH06B (890-5211 2)	9/6/23	09 25 Mountain		Solid			X	X	X	X	X	1	
BH01 (890-5211-3)	9/6/23	10 30 Mountain		Solid			X	X	X	X	X	1	
BH01B (890-5211-4)	9/6/23	10 55 Mountain		Solid			X	X	X	X	X	1	
BH02 (890-5211-5)	9/6/23	13 05 Mountain		Solid			X	X	X	X	X	1	
BH02A (890-5211-6)	9/6/23	13 15 Mountain		Solid			X	X	X	X	X	1	
BH03 (890-5211-7)	9/6/23	13 50 Mountain		Solid			X	X	X	X	X	1	
BH03A (890-5211-8)	9/6/23	14 00 Mountain		Solid			X	X	X	X	X	1	
BH04 (890-5211-9)	9/6/23	14 10 Mountain		Solid			X	X	X	X	X	1	

Note Since laboratory accreditations are subject to change Eurofins Environment Testing South Central, LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time:	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 5.4/5.1

Ver: 06/08/2021

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-1489 2
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 2 of 2
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-5211-1
Address: 1211 W Florida Ave	Due Date Requested: 9/12/2023			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701	PO #			
Phone: 432-704-5440(Tel)	WO #			
Email				
Project Name: PLU 18 TWIN WELLS RANCH EAST SATELLITE	Project #: 89000093			
Site	SSOW#:			

Analysis Requested

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

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note
			Preservation Code:										
BH04A (890-5211-10)	9/6/23	14 20 Mountain		Solid			X	X	X	X	X	1	
SS10 (890-5211-11)	9/6/23	12 15 Mountain		Solid			X	X	X	X	X	1	
SS11 (890-5211-12)	9/6/23	12 30 Mountain		Solid			X	X	X	X	X	1	

Note Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time:	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 5.4/5.1

Ver: 06/08/2021

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Released to Imaging: 2/29/2024 4:12:50 PM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5211-1
SDG Number: 03C1558144

Login Number: 5211
List Number: 1
Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5211-1
SDG Number: 03C1558144

Login Number: 5211
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 09/08/23 10:49 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

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JOB DESCRIPTION

PLU 18 TWIN WELLS RANCH SAT BATTERY
SDG NUMBER 03C1558144

JOB NUMBER

890-5577-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

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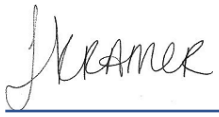
Eurofins Carlsbad

Job Notes

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

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

Authorization



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

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH SAT BATTERY

Laboratory Job ID: 890-5577-1
SDG: 03C1558144

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Definitions/Glossary

Client: Ensolum Job ID: 890-5577-1
Project/Site: PLU 18 TWIN WELLS RANCH SAT BATTERY SDG: 03C1558144

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
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: PLU 18 TWIN WELLS RANCH SAT BATTERY

Job ID: 890-5577-1
SDG: 03C1558144

Job ID: 890-5577-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5577-1

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

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

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

Receipt
The sample was received on 11/7/2023 4:32 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SW 05 (890-5577-1).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-66559 and analytical batch 880-66579 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-35552-A-41-D). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-66559 and analytical batch 880-66579 was outside the upper control limits.

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

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-66609 and analytical batch 880-66634 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

The associated samples are: SW 05 (890-5577-1), (890-5577-A-1-E MS) and (890-5577-A-1-F MSD).

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH SAT BATTERY

Job ID: 890-5577-1
SDG: 03C1558144

Client Sample ID: SW 05

Date Collected: 11/07/23 15:10
Date Received: 11/07/23 16:32
Sample Depth: 0-0.5'

Lab Sample ID: 890-5577-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/08/23 17:03	11/09/23 13:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/08/23 17:03	11/09/23 13:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/08/23 17:03	11/09/23 13:11	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/08/23 17:03	11/09/23 13:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/08/23 17:03	11/09/23 13:11	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/08/23 17:03	11/09/23 13:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*11/08/23 17:03*	*11/09/23 13:11*	*1*
1,4-Difluorobenzene (Surr)	*126*		*70 - 130*	*11/08/23 17:03*	*11/09/23 13:11*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			11/09/23 13:11	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/09/23 13:48	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/08/23 17:16	11/09/23 13:48	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/08/23 17:16	11/09/23 13:48	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/08/23 17:16	11/09/23 13:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*11/08/23 17:16*	*11/09/23 13:48*	*1*
o-Terphenyl	*101*		*70 - 130*	*11/08/23 17:16*	*11/09/23 13:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**55.2**	**F1**	4.99		mg/Kg			11/09/23 12:19	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH SAT BATTERY

Job ID: 890-5577-1
SDG: 03C1558144

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)
880-35552-A-41-B MS	Matrix Spike	95	116
880-35552-A-41-C MSD	Matrix Spike Duplicate	92	106
890-5577-1	SW 05	83	126
LCS 880-66559/1-A	Lab Control Sample	86	109
LCSD 880-66559/2-A	Lab Control Sample Dup	103	108
MB 880-66559/5-A	Method Blank	130	156 S1+

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-35525-A-33-F MS	Matrix Spike	122	98
880-35525-A-33-G MSD	Matrix Spike Duplicate	120	97
890-5577-1	SW 05	119	101
LCS 880-66562/2-A	Lab Control Sample	111	115
LCSD 880-66562/3-A	Lab Control Sample Dup	109	119
MB 880-66562/1-A	Method Blank	244 S1+	233 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH SAT BATTERY

Job ID: 890-5577-1
SDG: 03C1558144

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-66559/5-A
Matrix: Solid
Analysis Batch: 66579

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 66559

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/08/23 17:03	11/09/23 12:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/08/23 17:03	11/09/23 12:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/08/23 17:03	11/09/23 12:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/08/23 17:03	11/09/23 12:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/08/23 17:03	11/09/23 12:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/08/23 17:03	11/09/23 12:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*11/08/23 17:03*	*11/09/23 12:22*	*1*
1,4-Difluorobenzene (Surr)	*156*	*S1+*	*70 - 130*	*11/08/23 17:03*	*11/09/23 12:22*	*1*

Lab Sample ID: LCS 880-66559/1-A
Matrix: Solid
Analysis Batch: 66579

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 66559

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1009		mg/Kg		101	70 - 130		
Toluene			0.100	0.08743		mg/Kg		87	70 - 130		
Ethylbenzene			0.100	0.07392		mg/Kg		74	70 - 130		
m-Xylene & p-Xylene			0.200	0.1743		mg/Kg		87	70 - 130		
o-Xylene			0.100	0.08675		mg/Kg		87	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: LCSD 880-66559/2-A
Matrix: Solid
Analysis Batch: 66579

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 66559

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1103		mg/Kg		110	70 - 130	9	35
Toluene			0.100	0.09417		mg/Kg		94	70 - 130	7	35
Ethylbenzene			0.100	0.09305		mg/Kg		93	70 - 130	23	35
m-Xylene & p-Xylene			0.200	0.2256		mg/Kg		113	70 - 130	26	35
o-Xylene			0.100	0.1102		mg/Kg		110	70 - 130	24	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 880-35552-A-41-B MS
Matrix: Solid
Analysis Batch: 66579

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 66559

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0996	0.1023		mg/Kg		102	70 - 130		
Toluene	<0.00200	U F1	0.0996	0.07820		mg/Kg		79	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH SAT BATTERY

Job ID: 890-5577-1
SDG: 03C1558144

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

Lab Sample ID: 880-35552-A-41-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 66579 — **Prep Batch: 66559**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U F1	0.0996	0.06791	F1	mg/Kg		67	70 - 130
m-Xylene & p-Xylene	<0.00401	U F1	0.199	0.1731		mg/Kg		87	70 - 130
o-Xylene	<0.00200	U F1	0.0996	0.08610		mg/Kg		85	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

Lab Sample ID: 880-35552-A-41-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 66579 — **Prep Batch: 66559**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0990	0.07918		mg/Kg		79	70 - 130	25	35
Toluene	<0.00200	U F1	0.0990	0.06491	F1	mg/Kg		66	70 - 130	19	35
Ethylbenzene	<0.00200	U F1	0.0990	0.05282	F1	mg/Kg		52	70 - 130	25	35
m-Xylene & p-Xylene	<0.00401	U F1	0.198	0.1324	F1	mg/Kg		67	70 - 130	27	35
o-Xylene	<0.00200	U F1	0.0990	0.06742	F1	mg/Kg		67	70 - 130	24	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

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

Lab Sample ID: MB 880-66562/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 66571 — **Prep Batch: 66562**

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		11/08/23 17:16	11/09/23 08:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/08/23 17:16	11/09/23 08:00	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/08/23 17:16	11/09/23 08:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*244*	*S1+*	*70 - 130*	*11/08/23 17:16*	*11/09/23 08:00*	*1*
o-Terphenyl	*233*	*S1+*	*70 - 130*	*11/08/23 17:16*	*11/09/23 08:00*	*1*

Lab Sample ID: LCS 880-66562/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 66571 — **Prep Batch: 66562**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1016		mg/Kg		102	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1008		mg/Kg		101	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH SAT BATTERY

Job ID: 890-5577-1
SDG: 03C1558144

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

Lab Sample ID: LCS 880-66562/2-A
Matrix: Solid
Analysis Batch: 66571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 66562

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	115		70 - 130

Lab Sample ID: LCSD 880-66562/3-A
Matrix: Solid
Analysis Batch: 66571

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 66562

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	976.6		mg/Kg		98	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	954.5		mg/Kg		95	70 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	109		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: 880-35525-A-33-F MS
Matrix: Solid
Analysis Batch: 66571

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 66562

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	1010	861.3		mg/Kg		82	70 - 130
Diesel Range Organics (Over C10-C28)	<50.3	U	1010	1133		mg/Kg		110	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: 880-35525-A-33-G MSD
Matrix: Solid
Analysis Batch: 66571

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 66562

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	1010	846.6		mg/Kg		80	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<50.3	U	1010	1134		mg/Kg		110	70 - 130	0	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	120		70 - 130
o-Terphenyl	97		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH SAT BATTERY

Job ID: 890-5577-1
SDG: 03C1558144

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-66609/1-A
Matrix: Solid
Analysis Batch: 66634

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			11/09/23 12:02	1

Lab Sample ID: LCS 880-66609/2-A
Matrix: Solid
Analysis Batch: 66634

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	260.5		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-66609/3-A
Matrix: Solid
Analysis Batch: 66634

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	260.0		mg/Kg		104	90 - 110	0	20

Lab Sample ID: 890-5577-1 MS
Matrix: Solid
Analysis Batch: 66634

Client Sample ID: SW 05
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	55.2	F1	250	330.9	F1	mg/Kg		111	90 - 110		

Lab Sample ID: 890-5577-1 MSD
Matrix: Solid
Analysis Batch: 66634

Client Sample ID: SW 05
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	55.2	F1	250	332.5	F1	mg/Kg		111	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH SAT BATTERY

Job ID: 890-5577-1
SDG: 03C1558144

GC VOA

Prep Batch: 66559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5577-1	SW 05	Total/NA	Solid	5035	
MB 880-66559/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-66559/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-66559/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-35552-A-41-B MS	Matrix Spike	Total/NA	Solid	5035	
880-35552-A-41-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 66579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5577-1	SW 05	Total/NA	Solid	8021B	66559
MB 880-66559/5-A	Method Blank	Total/NA	Solid	8021B	66559
LCS 880-66559/1-A	Lab Control Sample	Total/NA	Solid	8021B	66559
LCSD 880-66559/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	66559
880-35552-A-41-B MS	Matrix Spike	Total/NA	Solid	8021B	66559
880-35552-A-41-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	66559

Analysis Batch: 66645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5577-1	SW 05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 66562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5577-1	SW 05	Total/NA	Solid	8015NM Prep	
MB 880-66562/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-66562/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-66562/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-35525-A-33-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-35525-A-33-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 66571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5577-1	SW 05	Total/NA	Solid	8015B NM	66562
MB 880-66562/1-A	Method Blank	Total/NA	Solid	8015B NM	66562
LCS 880-66562/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	66562
LCSD 880-66562/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	66562
880-35525-A-33-F MS	Matrix Spike	Total/NA	Solid	8015B NM	66562
880-35525-A-33-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	66562

Analysis Batch: 66643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5577-1	SW 05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 66609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5577-1	SW 05	Soluble	Solid	DI Leach	
MB 880-66609/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-66609/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-66609/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH SAT BATTERY

Job ID: 890-5577-1
SDG: 03C1558144

HPLC/IC (Continued)

Leach Batch: 66609 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5577-1 MS	SW 05	Soluble	Solid	DI Leach	
890-5577-1 MSD	SW 05	Soluble	Solid	DI Leach	

Analysis Batch: 66634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5577-1	SW 05	Soluble	Solid	300.0	66609
MB 880-66609/1-A	Method Blank	Soluble	Solid	300.0	66609
LCS 880-66609/2-A	Lab Control Sample	Soluble	Solid	300.0	66609
LCSD 880-66609/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	66609
890-5577-1 MS	SW 05	Soluble	Solid	300.0	66609
890-5577-1 MSD	SW 05	Soluble	Solid	300.0	66609

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH SAT BATTERY

Job ID: 890-5577-1
SDG: 03C1558144

Client Sample ID: SW 05
Date Collected: 11/07/23 15:10
Date Received: 11/07/23 16:32

Lab Sample ID: 890-5577-1
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	66559	11/08/23 17:03	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	66579	11/09/23 13:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			66645	11/09/23 13:11	AJ	EET MID
Total/NA	Analysis	8015 NM		1			66643	11/09/23 13:48	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	66562	11/08/23 17:16	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	66571	11/09/23 13:48	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	66609	11/09/23 10:51	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	66634	11/09/23 12:19	SMC	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH SAT BATTERY

Job ID: 890-5577-1
SDG: 03C1558144

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 18 TWIN WELLS RANCH SAT BATTERY

Job ID: 890-5577-1
SDG: 03C1558144

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Job ID: 890-5577-1
Project/Site: PLU 18 TWIN WELLS RANCH SAT BATTERY
SDG: 03C1558144

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5577-1	SW 05	Solid	11/07/23 15:10	11/07/23 16:32	0-0.5'

5577 5577

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

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Project Manager:	Thomas Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy, Inc
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337.257.8307	Email:	tmorrissey@ensolum.com

Work Order Comments

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

Project Name:	PLU 18 TWIN WELLS RANCH SAT BATTERY	Turn Around	☐ Routine ☑ Rush
Project Number:	03C1558144	Due Date:	24Hr
Project Location:	32.20635, -103.81299	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Meredith Roberts		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TWN007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.6
Total Containers:		Corrected Temperature:	1.4

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX	Chlorides	TPH
SW05	S	11/7/23	1510	0-0.5'	C	1		X	X	X

Sample Comments

Incident #: NAPP2230551957
Cost Center: 2111031001
mroberts@ensolum.com

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

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

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 11/10/2023 1:29:49 PM
11/9/2023
Page 18 of 20
Released to Imaging: 2/29/2024 4:12:50 PM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5577-1
SDG Number: 03C1558144

Login Number: 5577
List Number: 1
Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5577-1
SDG Number: 03C1558144

Login Number: 5577
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 11/09/23 10:55 AM

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

ENSOLUM

APPENDIX E

NMOCD Notifications

Tacoma Morrissey

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Thursday, December 8, 2022 10:38 AM
To: ocd.enviro@emnrd.nm.gov; Bratcher, Michael, EMNRD; Harimon, Jocelyn, EMNRD; Hamlet, Robert, EMNRD
Cc: DelawareSpills /SM; Tacoma Morrissey
Subject: XTO - Sampling Notification (Week of 12/12/22 - 12/16/22)

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of Dec 12, 2022.

- PLU 27 BD 161H / nAPP2217546910, nAPP2218236445, nAPP2218943007
- PLU 18 TWR Sat Battery/ nAPP2230551957
- Pickett Draw Federal #001/ NAB1919955454

Thank you,

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

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

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Thursday, August 31, 2023 10:01 AM
To: Collins, Melanie <melanie.collins@exxonmobil.com>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Subject: RE: [EXTERNAL] XTO - Sampling Notification (Week of 9/5/23 - 9/8/23)

External Email - Think Before You Click

Hi Melanie,

The OCD has received your notification. When reporting sampling at multiple locations it is required to provide the date and time for each location. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Environmental Bureau
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive|Santa Fe, NM 87505
(505)469-7520|Shelly.Wells@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Collins, Melanie <melanie.collins@exxonmobil.com>
Sent: Thursday, August 31, 2023 8:49 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; spills@slo.state.nm.us
Cc: bbelill@ensolum.com; Green, Garrett J <garrett.green@exxonmobil.com>
Subject: [EXTERNAL] XTO - Sampling Notification (Week of 9/5/23 - 9/8/23)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

XTO plans to complete final sampling activities at the sites listed below for the week of September 5, 2023.

Tuesday
- PLU 18 TWR Sat Battery / nAPP2230551957

Wednesday
- PLU 18 TWR Sat Battery / nAPP2230551957
- James Ranch Unit 19 Tank Battery / NAPP2322348507 (SLO)

Thursday
- PLU 18 TWR Sat Battery / nAPP2230551957
- James Ranch Unit 2 702H / nAPP2211654411
- JRU 108 / nAPP2217931599
- Hudson 1 Fed Com 9H / nAPP2322645119

Friday
- PLU 18 TWR Sat Battery / nAPP2230551957
- JRU 108 / nAPP2217931599
- Hudson 1 Fed Com 9H / nAPP2322645119

Thank you,

Melanie Collins

XTO ENERGY

Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

From: Collins, Melanie
To: Ben Belill
Subject: FW: (Extension Approval) - XTO - PLU 18 TWR Sat Battery - Incident Number nAPP2230551957
Date: Thursday, August 10, 2023 11:04:33 AM
Attachments: image003.png

[**EXTERNAL EMAIL**]

Melanie Collins

XTO ENERGY

Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

From: Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Sent: Monday, August 7, 2023 8:57 AM
To: Collins, Melanie <melanie.collins@exxonmobil.com>
Cc: Green, Garrett J <garrett.green@exxonmobil.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Pennington, Shelby G <shelby.g.pennington@exxonmobil.com>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Subject: (Extension Approval) - XTO - PLU 18 TWR Sat Battery - Incident Number nAPP2230551957

External Email – Think Before You Click

RE: Incident #**NAPP2230551957**

Melanie,

Your request for an extension to **November 12, 2023** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
506 W. Texas Ave.| Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Collins, Melanie <melanie.collins@exxonmobil.com>
Sent: Friday, August 4, 2023 1:49 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>
Cc: Green, Garrett J <garrett.green@exxonmobil.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Pennington, Shelby G <shelby.g.pennington@exxonmobil.com>
Subject: [EXTERNAL] XTO - Extension Request - PLU 18 TWR Sat Battery - Incident Number nAPP2230551957

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

XTO is requesting an extension of the current deadline of August 14, 2023, for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC at the PLU 18 TWR East Satellite Battery (Incident Number nAPP2230551957). The release occurred on October 20, 2022, and initial site assessment and delineation activities have been completed. A Remediation Work Plan was submitted to the New Mexico Oil Conservation Division (NMOCD) on January 13, 2023. The Work Plan proposed to remove impacted soil, but was denied on May 16, 2023, due to insufficient nearby depth to groundwater data that is less than 25 years in age and outside a ½ mile radius from the site. To establish regional depth to ground water at the Site, XTO has scheduled a depth to water (DTW) boring to be completed during the week of August 7, 2023. In order to advance the DTW soil boring, complete excavation activities, conduct final confirmation soil sampling, and submit a revised remediation work plan or closure report, XTO respectfully requests a 90-day extension until November 12, 2023.

Thank you,

Melanie Collins
Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

From: Wells, Shelly, EMNRD
To: Collins, Melanie; Hamlet, Robert, EMNRD; Bratcher, Michael, EMNRD
Cc: Green, Garrett J; Ben Belill; Tacoma Morrissey; Lambert, Tommee L; DelawareSpills /SM
Subject: RE: [EXTERNAL] XTO - Sampling Notification (Week of 10/16/23 - 10/20/23)
Date: Thursday, October 12, 2023 4:26:05 PM
Attachments: image001.png

Some people who received this message don't often get email from shelly.wells@emnrd.nm.gov. Learn why this is important

[**EXTERNAL EMAIL**]

Hi Melanie,

The OCD has received your notification. Notification requirements are **two full business days**, per rule. When reporting sampling at multiple locations it is required to provide the anticipated start time for each location. You may proceed on your schedule. This, and all correspondence, should be included in the closure report to ensure inclusion in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Environmental Bureau
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive|Santa Fe, NM 87505
(505)469-7520|Shelly.Wells@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Collins, Melanie <melanie.collins@exxonmobil.com>
Sent: Thursday, October 12, 2023 2:14 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Green, Garrett J <garrett.green@exxonmobil.com>; bbelill@ensolum.com; Tacoma Morrissey <tmorrissey@ensolum.com>; Lambert, Tommee L <tommee.l.lambert@exxonmobil.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>
Subject: [EXTERNAL] XTO - Sampling Notification (Week of 10/16/23 - 10/20/23)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

XTO plans to complete final sampling activities at the sites listed below for the week of October 16,

2023.

Monday – October 16, 2023

- BEU Connector PW Booster / nAPP2213151424
- Mobley Ranch Pipeline / nAPP2316045229
- PLU 18 TWR Sat Battery / nAPP2230551957

Tuesday - October 17, 2023

- BEU Connector PW Booster / nAPP2213151424
- Mobley Ranch Pipeline / nAPP2316045229

Wednesday - October 18, 2023

- BEU Connector PW Booster / nAPP2213151424
- Mobley Ranch Pipeline / nAPP2316045229

Thursday - October 19, 2023

- BEU Connector PW Booster / nAPP2213151424
- Mobley Ranch Pipeline / nAPP2316045229
- PLU 23 Dog Town Draw 154H / nAPP2316446382

Friday - October 20, 2023

- BEU Connector PW Booster / nAPP2213151424
- Mobley Ranch Pipeline / nAPP2316045229

Thank you,

Melanie Collins

XTO ENERGY

Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

From: Wells, Shelly, EMNRD
To: Collins, Melanie; spills@slo.state.nm.us; Hamlet, Robert, EMNRD; Bratcher, Michael, EMNRD
Cc: Green, Garrett J; Ben Belill; Tacoma Morrissey; DelawareSpills /SM; Lambert, Tommee L
Subject: RE: [EXTERNAL] XTO - Sampling Notification (Week of 10/9/23 - 10/13/23)
Date: Thursday, October 5, 2023 12:47:44 PM
Attachments: image001.png

Some people who received this message don't often get email from shelly.wells@emnrd.nm.gov. Learn why this is important

[**EXTERNAL EMAIL**]

Hi Melanie,

The OCD has received your notification. When reporting sampling at multiple locations it is required to provide the date and time for each location. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Environmental Bureau
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive|Santa Fe, NM 87505
(505)469-7520|Shelly.Wells@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Collins, Melanie <melanie.collins@exxonmobil.com>
Sent: Thursday, October 5, 2023 10:31 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; spills@slo.state.nm.us
Cc: Green, Garrett J <garrett.green@exxonmobil.com>; bbelill@ensolum.com; Tacoma Morrissey <tmorrissey@ensolum.com>; DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Lambert, Tommee L <tommee.l.lambert@exxonmobil.com>
Subject: [EXTERNAL] XTO - Sampling Notification (Week of 10/9/23 - 10/13/23)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

XTO plans to complete final sampling activities at the sites listed below for the week of October 9, 2023.

Tuesday

- Corral Canyon Expansion / NRM2021833146
- James Ranch Unit 21 Riser / Napp2322742848

Wednesday

- James Ranch Unit 21 Riser / Napp2322742848
- Corral Canyon Expansion / NRM2021833146

Thursday

- James Ranch Unit 21 Riser / Napp2322742848
- JRU DI 11 Ekalaka 823H / NAPP2224527297 (SLO)
- PLU 23 Dog Town Draw 154H / nAPP2316446382

Friday

- JRU 108H / nAPP2217931599
- PLU 18 TWR Sat Battery / nAPP2230551957

Thank you,

Melanie Collins

XTO ENERGY

Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

From: Collins, Melanie
To: Tacoma Morrissey; Ashley Ager
Cc: Green, Garrett J
Subject: FW: The Oil Conservation Division (OCD) has rejected the application, Application ID: 176547
Date: Thursday, May 18, 2023 8:25:21 AM

[**EXTERNAL EMAIL**]

PLU 18 TWR Sat Battery

From: OCDOnline@state.nm.us <OCDOnline@state.nm.us>
Sent: Tuesday, May 16, 2023 11:35 AM
To: Collins, Melanie <melanie.collins@exxonmobil.com>
Subject: The Oil Conservation Division (OCD) has rejected the application, Application ID: 176547

External Email - Think Before You Click

To whom it may concern (c/o Melanie Collins for XTO ENERGY, INC),

The OCD has rejected the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nAPP2230551957,
for the following reasons:

- **The Remediation Plan is denied. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. If evidence of depth to ground water within a ½ mile radius of the site cannot be provided, impacted soils will need to meet Table 1 Closure Criteria for ground water at a depth of 50 feet or less. The variance is approved for confirmation floor samples to be collected every 500 ft2. Confirmation sidewall samples should be collected every 200 ft2. The work will need to occur in 90 days after the work plan has been reviewed.**

The rejected C-141 can be found in the OCD Online: Permitting - Action Status, under the Application ID: 176547.
Please review and make the required correction(s) prior to resubmitting.
If you have any questions why this application was rejected or believe it was rejected in error, please contact me prior to submitting an additional C-141.

Thank you,
Robert Hamlet
575-748-1283
Robert.Hamlet@emnrd.nm.gov

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

ENSOLUM

APPENDIX F

Remediation Work Plan, January 13, 2023

ENSOLUM

January 13, 2022

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

Re: Remediation Work Plan
PLU 18 Twin Wells Ranch East Satellite
Incident Number NAPP2230551957
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following *Remediation Work Plan* (*Work Plan*) to document the assessment and soil sampling activities completed to date and to propose a work plan to address the impacted soil identified at the Poker Lake Unit (PLU) 18 Twin Wells Ranch East Satellite (Site). The purpose of the Site assessment and soil sampling activities was to delineate the lateral and vertical extent of impacted soil resulting from a release of produced water at the Site. The following *Work Plan* proposes to excavate impacted soil identified and proposes a sampling variance.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit G, Section 19, Township 24 South, Range 31 East, in Eddy County, New Mexico (32.20635°, -103.81299°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On October 20, 2022, corrosion caused a fitting to separate on the pipe rack, which resulted in the release of 14.22 barrels (bbls) of produced water onto the well pad. A vacuum truck was immediately dispatched to the Site to recover the free-standing fluids; approximately 2 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on November 1, 2022. The release was assigned Incident Number NAPP2230551957.

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.

Depth to groundwater at the Site is estimated to be between 50 feet and 100 feet below ground surface (bgs) based on the nearest groundwater well data. The nearest groundwater well with depth to groundwater data is United States Geological Suvery (USGS) well 321310103482101 located approximately 1 mile north of the Site. The groundwater well has a reported depth to groundwater of

74 feet bgs and the total depth of the well is undetermined. In addition, New Mexico Office of the State Engineer (NMOSE) documents three wells, C-4483, C-4499, and C-4478, located approximately 1 mile to 1.5 miles to the west, east, and south of the Site, respectively, all indicating regional depth to groundwater is greater than 100 feet bgs. Multiple data point exist around the Site and there are no surface features indicative of the presence of shallow groundwater. Per 19.15.29.11A.(2), a reasonable probable depth to groundwater has been presented based on regional data. All wells used for depth to water determination are depicted on Figure 1 and the referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is Poker Lake, located approximately 5,706 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

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

SITE ASSESSMENT AND DELINEATION ACTIVITIES

On November 16, 2022, Ensolum personnel completed a Site visit to evaluate the release extent based on information provided on the Form C-141 and visual observations. Eight soil samples (SS01 through SS08) were collected within and around the release extent at a depth of 0.5 feet bgs; soil samples SS01 through SS04 were collected within the release extent on pad and samples SS05 through SS08 were collected around the release extent to confirm the lateral exent. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and for chloride utilizing Hach® chloride QuanTab® test strips. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included in Appendix B.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following contaminants of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0. Soil samples delivered to the laboratory the same day they are collected may not have equilibrated to the 6 degrees Celcius required for shipment and long term storage, but are considered to have been received in acceptable condition.

On December 15, 2022 delineation activities were conducted at the Site to assess the vertical extent of impacted soil. Potholes PH01 through PH08 were advanced via track mounted backhoe at the locations

of soil samples SS01 through SS08. The delineation potholes were advanced to a maximum depth of 4 feet bgs. Discrete delineation soil samples were collected from each pothole at depths ranging from 1-foot bgs to 4 feet bgs. Soil from the potholes was field screened for VOCs and chloride and field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Appendix C. The delineation soil samples were handled and analyzed as described above. The delineation soil sample locations are depicted on Figure 2.

LABORATORY ANALYTICAL RESULTS

All COC concentrations, with the exception of chloride, were compliant with the most stringent Table I Closure Criteria in soil samples SS01 through SS08 and in all delineation soil samples from potholes PH01 through PH08. No hydrocarbon impacted soil was identified during Site assessment activities.

Laboratory analytical results for soil samples SS01 through SS04, collected within the release extent on pad, indicated chloride concentrations exceeded the Site Closure Criteria. Laboratory analytical results for soil samples SS05 through SS08, collected outside the release extent, indicated that the chloride concentrations were compliant with the Table I Closure Criteria and the most stringent Table I Closure Criteria and successfully defined the lateral extent of the release.

Laboratory analytical results for the delineation soil samples collected from potholes PH01 through PH08 at depths ranging from 1-foot bgs to 4 feet bgs, indicated chloride concentrations were compliant with the Table 1 Closure Criteria and defined the vertical extent of the impacted soil on pad. The laboratory analytical results are summarized on Table 1 and the complete laboratory analytical reports are included in Appendix D.

PROPOSED REMEDIATION WORK PLAN

XTO will proceed with excavation of impacted soil on pad to below the Site Closure Criteria. Based on the delineation soil sample analytical results and area of the release extent, an estimated 1,000 cubic yards of impacted soil will be excavated from the well pad.

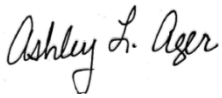
Due to the estimated 27,145 square foot size of the excavation, XTO requests a variance for frequency of confirmation sampling. XTO proposes the frequency of confirmation sampling for the excavation floor be decreased from every 200 square feet (approximately 136 samples) to every 500 square feet (approximately 55 samples). Each 5-point composite floor sample will represent a 500 square foot area. Sidewall samples in areas where the excavation is shallow (less than 1-foot bgs) will be incorporated into the floor sample aliquots. The soil samples will be handled as described above and analyzed for chloride at Eurofins in Carlsbad, New Mexico. The soil samples will be analyzed for chloride only since no hydrocarbon impacts were identified in any of the samples collected at the Site. The source of the release was produced water and chloride is the established COC.

XTO will complete the excavation activities within 90 days of the date of approval of this Work Plan by the NMOCD.

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

Sincerely,
Ensolum, LLC

Anita Thapalia, PG
Project Geologist



Ashley L. Ager, PG
Program Director

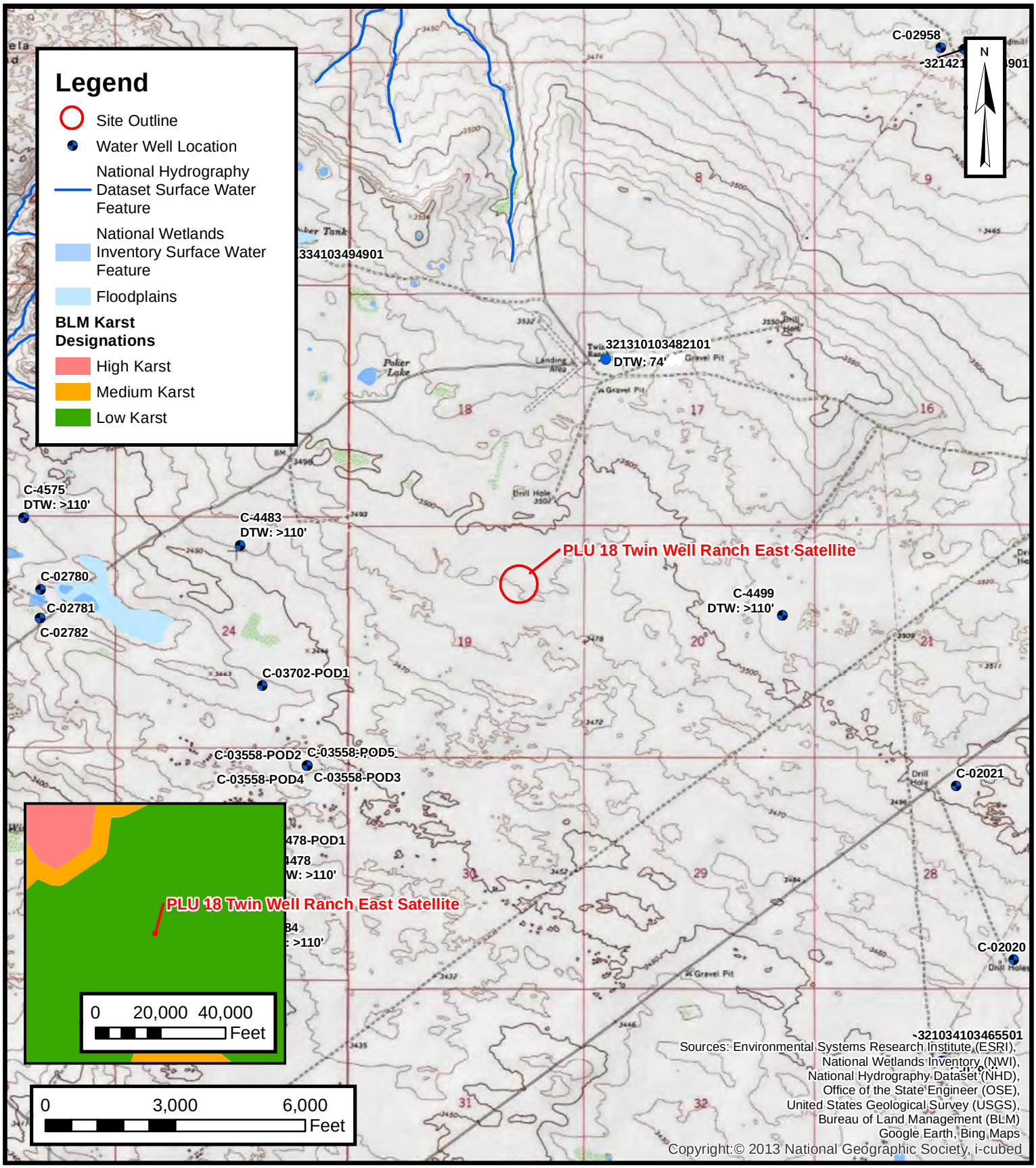
cc: Garrett Green, XTO
Shelby Pennington, XTO
BLM

Appendices:

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

ENSOLUM

FIGURES

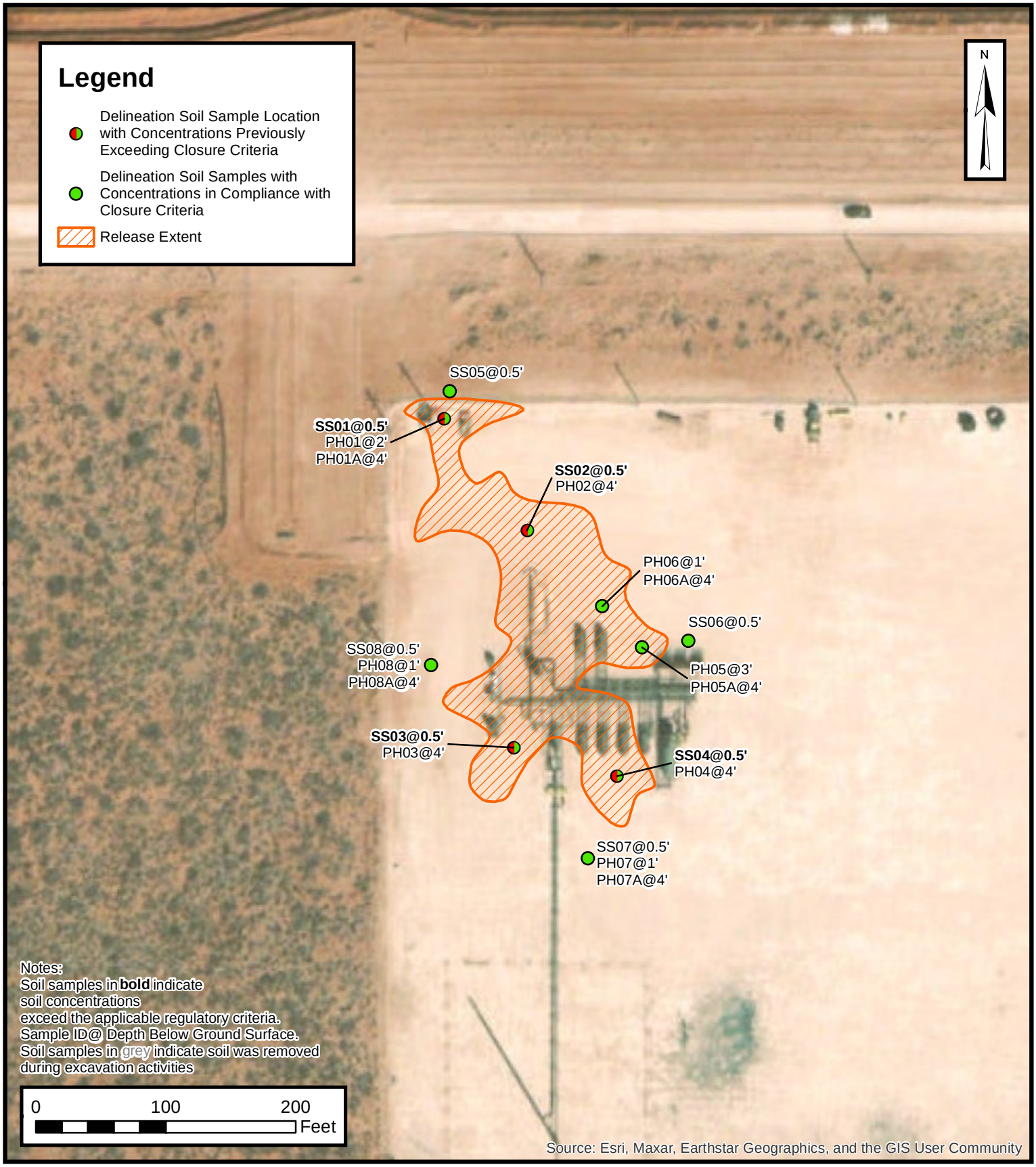


ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
PLU 18 Twin Well Ranch East Satellite
NAPP2230551957
Unit G, Sec 19, T24S, R31E
Eddy County, New Mexico

FIGURE
1



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

XTO Energy, Inc
PLU 18 Twin Well Ranch East Satellite
NAPP2230551957
Unit G, Sec 19, T24S, R31E
Eddy County, New Mexico

FIGURE
2

ENSOLUM

TABLES

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 18 TWIN WELLS RANCH EAST SATELLITE
XTO ENERGY, INC
Eddy County, NM

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	1,000	2,500	10,000
Delineation Soil Samples										
SS01	11/16/2022	0.5	<0.00201	<0.00402	66.7	<50.0	<50.0	<50.0	66.7	**46,500**
PH01	12/15/2022	2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	3,300
PH01A	12/15/2022	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	37.8
SS02	11/16/2022	0.5	<0.00200	<0.00401	78.8	<50.0	60.3	<50.0	139	**26,600**
PH02	12/15/2022	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	148
SS03	11/16/2022	0.5	<0.00200	<0.00399	65.4	<49.8	<49.8	<49.8	65.4	**26,900**
PH03	12/15/2022	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	217
SS04	11/16/2022	0.5	<0.00202	<0.00404	67.2	<50.0	<50.0	<50.0	67.2	**38,000**
PH04	12/15/2022	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	86.6
SS05	11/16/2022	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	18.1
PH05	12/15/2022	3	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	1,960
PH05A	12/15/2022	4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	1,210
SS06	11/16/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	35.2
PH06	12/15/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	1,360
PH06A	12/15/2022	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	1,280
SS07	11/16/2022	0.5	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	57.9
PH07	12/15/2022	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	3,440
PH07A	12/15/2022	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	405
SS08	11/16/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	49.4
PH08	12/15/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	1,070
PH08A	12/15/2022	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	275

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

ENSOLUM

APPENDIX A

Referenced Well Records

National Water Information System: Web Interface

USGS Water Resources

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

Click to hideNews Bulletins

- See the Water Data for the Nation Blog for the latest news and updates.

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 321310103482101

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

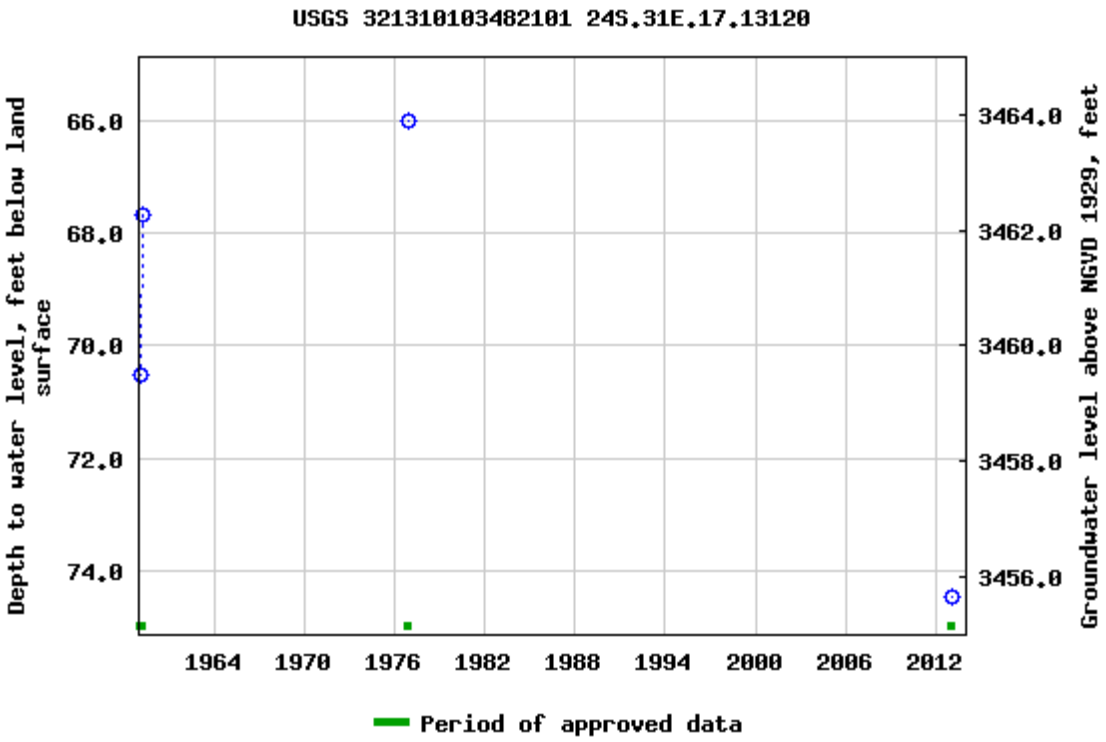
USGS 321310103482101 24S.31E.17.13120

Available data for this site | Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°13'14.1", Longitude 103°48'23.4" NAD83
Land-surface elevation 3,530.00 feet above NGVD29
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

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



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
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Help
Data Tips
Explanation of terms
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U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2022-11-22 13:20:45 EST
0.57 0.49 nadww01

Click to hideNews Bulletins

- See the Water Data for the Nation Blog for the latest news and updates.

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 321310103482101

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

USGS 321310103482101 24S.31E.17.13120

Eddy County, New Mexico
Latitude 32°13'14.1", Longitude 103°48'23.4" NAD83
Land-surface elevation 3,530.00 feet above NGVD29
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measu
1959-02-03		D	62610		3459.50	NGVD29	P	Z		
1959-02-03		D	62611		3461.24	NAVD88	P	Z		
1959-02-03		D	72019	70.50			P	Z		
1959-03-25		D	62610		3462.33	NGVD29	1	Z		
1959-03-25		D	62611		3464.07	NAVD88	1	Z		
1959-03-25		D	72019	67.67			1	Z		
1976-12-02		D	62610		3463.98	NGVD29	1	Z		
1976-12-02		D	62611		3465.72	NAVD88	1	Z		
1976-12-02		D	72019	66.02			1	Z		
2013-01-17	21:00 UTC	m	62610		3455.56	NGVD29	1	S	USGS	
2013-01-17	21:00 UTC	m	62611		3457.30	NAVD88	1	S	USGS	
2013-01-17	21:00 UTC	m	72019	74.44			1	S	USGS	

Explanation

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

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey
Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2022-11-23 08:58:38 EST
0.27 0.23 nadww01

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (BH-01)	n/a	C-4483

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

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

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32°	12'	31.77"	N
	LONGITUDE	-104°	50'	0.72"	W

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

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

NW NW NE Sec. 24 T24S R30E

2. DRILLING & CASING INFORMATION

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

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
11/24/2020	11/24/2020	temporary well material	110	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

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

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	110	±8.5	Boring- HSA	--	--	--	--

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
				OSE DII DEC 17 2020 PM3:29	

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. C-4483	POD NO. 1	TRN NO. 679344	
LOCATION 23 T24S R30E Sec 24		WELL TAG ID NO. NA	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	24	24	Sand, Fine-grained,poorly-graded, with caliche, Tan-Off-White	Y ✓ N	
24	34	10	Sand, Fine-grained,poorly-graded, silty, with caliche gravel, Tan-Off-White	Y ✓ N	
34	51	17	Sand, Fine-grained,poorly-graded, silty, with caliche gravel, Light Brown	Y ✓ N	
51	54	3	Sand, Fine-grained,poorly-graded, silty, with caliche gravel, Light Brown-Brown	Y ✓ N	
54	76	22	Sand, Fine-grained,poorly-graded, Brown, dry	Y ✓ N	
76	101	25	Sand, Fine-grained,poorly-graded, Light-Brown, dry	Y ✓ N	
101	110	9	Sand, Fine-grained,poorly-graded, with gravel, Light-Brown, dry-moist	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

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

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

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

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

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

Shane Eldridge

6. SIGNATURE

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

Jack Atkins — Jackie D. Atkins — 12/14/20

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

OSE DII DEC 17 2020 PM 3:23

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

FILE NO. C-4483	POD NO. 1	TRN NO. 629344	
LOCATION 12 3 T24S R30E Sec 24		WELL TAG ID NO. N/A	PAGE 2 OF 2

John R. D Antonio, Jr., P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 679344
File Nbr: C 04483
Well File Nbr: C 04483 POD1

Jan. 22, 2021

TACOMA MORRISSEY
LT ENVIRONMENTAL INC
508 WEST STEVENS
CARLSBAD, NM 88220

Greetings:

The above numbered permit was issued in your name on 09/29/2020.

The Well Record was received in this office on 12/17/2020, stating that it had been completed on 11/24/2020, and was a dry well. The well is to be plugged according to 19.27.4.30 NMAC.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 09/29/2021.

If you have any questions, please feel free to contact us.

Sincerely,

Andrew Dennis
(575)622-6521

drywell

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (MW-1)	n/a	C-4499

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

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

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32°	12'	15.89"	N
	LONGITUDE	-103°	47'	36.29"	W

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

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

SE NE Sec. 20 T24S R31E

2. DRILLING & CASING INFORMATION

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

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
12/30/2020	12/30/2020	temporary well material	110	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

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

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	110	±8.5	Boring- HSA	--	--	--	--

3. ANNULAR MATERIAL

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

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. C-4499	POD NO. 1	TRN NO. 682532
LOCATION 24S.31E.20.243	WELL TAG ID NO. —	PAGE 1 OF 2

OSE DII JAN 27 2021 PM3:34

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	6	6	SAND, well graded, fine-to-large grain particles red-brown, dry	~~Y~~ ✓ N	
6	8	2	SAND, poorly graded, fine grained little clay mod. plasitcity, red-brown, moist	Y ✓ N	
8	11	3	CALICHE, mod. consolidated, some sand, medium /fine grain, white-tan, dry	Y ✓ N	
11	46	35	CALICHE, mod. consolidated, some sand, medium to fine grain, white-tan, dry.	Y ✓ N	
46	74	28	SAND, well-graded, medium grain,caliche gravel (1-4mm), light brown, dry.	Y ✓ N	
74	110	36	SAND, well-graded, fine/large grain, few clay, cohesive, red-brown, dry	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

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

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

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

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

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

Shane Eldridge

6. SIGNATURE

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

Jack Atkins — Jackie D. Atkins — 01/15/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

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

FILE NO. C-4499	POD NO. 1	TRN NO. 682532
LOCATION	WELL TAG ID NO.	PAGE 2 OF 2

OSE DIT JAN 27 2021 PM3:34

2021-1-15_C-4499_POD1_OSE_Well Record and Log_plu129-forsign

Final Audit Report 2021-01-15

Created:	2021-01-15
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAgs296c366oCIfIrLCiy9WDKJlrUnq-9u

"2021-1-15_C-4499_POD1_OSE_Well Record and Log_plu129-forsign" History

Document created by Lucas Middleton (lucas@atkinseng.com)
2021-01-15 - 8:45:00 PM GMT- IP address: 69.21.248.123

Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2021-01-15 - 8:45:35 PM GMT

Email viewed by Jack Atkins (jack@atkinseng.com)
2021-01-15 - 9:05:13 PM GMT- IP address: 74.50.153.115

Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2021-01-15 - 9:13:18 PM GMT - Time Source: server- IP address: 74.50.153.115

Agreement completed.
2021-01-15 - 9:13:18 PM GMT

OSE DIT JAN 27 2021 PM3:34

Adobe Sign

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

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2020 OCT 22 PM 1:03

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (BH-01)	n/a	C-4478

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

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

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32°	11'	22.57"	N
LONGITUDE	-103°	49'	56.14"	W

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

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

SW SE NE Sec. 25 T24S R30E

2. DRILLING & CASING INFORMATION

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

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
10/07/2020	10/07/2020	temporary well material	110	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

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

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	110	±8.5	Boring- HSA	--	--	--	--

3. ANNULAR MATERIAL

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

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. C-4478	POD NO. 1	TRN NO. 678382	
LOCATION 24S-30E-25 23-3		WELL TAG ID NO. NA	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	3	3	Sand, fine-grained, poorly-graded , Red-Brown	Y ✓ N	
3	5	2	Gravel, 20-30 mil, well graded, little clay	Y ✓ N	
5	13	8	Caliche with some gravel (5-20 mil.) Tan/ Brown	Y ✓ N	
13	24	9	Sand, fine-grained, well-graded some silt, Tan/ Red	Y ✓ N	
24	34	10	Sand, Medium-grained, well-graded some silt, Tan/ Red	Y ✓ N	
34	44	10	Sand, Large-grained, well-graded some silt, Dark Brown	Y ✓ N	
44	110	66	Sand, fine-grained, well-graded, some clay, moist, caliche fragments Red/Brown	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

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

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

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

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

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

Shane Eldridge

6. SIGNATURE

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

Jack Atkins — Jackie D. Atkins — 10/26/2020

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

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

FILE NO. C-4478	POD NO. 1	TRN NO. 678382	
LOCATION 24S-30E-25 2-3-3		WELL TAG ID NO. NA	PAGE 2 OF 2

2020-10-26_C-4478POD1_OSE_Well Record and Log-89-forsign

Final Audit Report 2020-10-27

Created:	2020-10-27
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAESGKFRG9AU3NcytvOCSRntC1Y-zTs43Y

"2020-10-26_C-4478POD1_OSE_Well Record and Log-89-forsign" History

Document created by Lucas Middleton (lucas@atkinseng.com)
2020-10-27 - 3:14:03 PM GMT- IP address: 69.21.248.123

Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2020-10-27 - 3:14:17 PM GMT

Email viewed by Jack Atkins (jack@atkinseng.com)
2020-10-27 - 3:21:12 PM GMT- IP address: 74.50.153.115

Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2020-10-27 - 3:22:09 PM GMT - Time Source: server- IP address: 74.50.153.115

Agreement completed.
2020-10-27 - 3:22:09 PM GMT

2020 OCT 29 PM 1:06

Adobe Sign

ENSOLUM

APPENDIX B

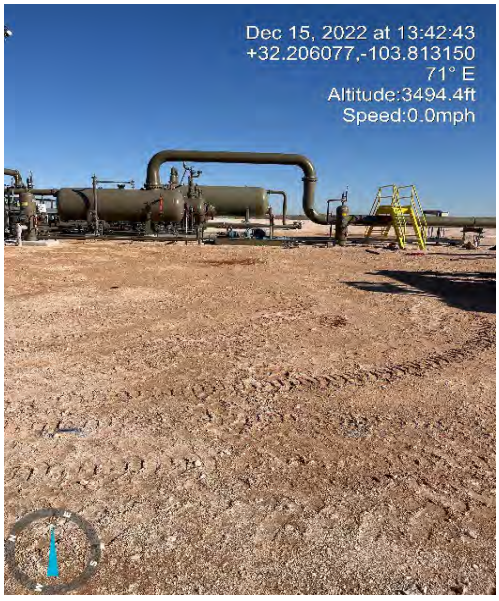
Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc.
PLU 18 Twin Ranch East Satellite
Incident Number NAPP2230551957

Photograph: 1 Date: 11/16/2022
Description: Site assessment activities
View: Northwest

Photograph: 2 Date: 11/16/2022
Description: Site assessment activities
View: Southeast



Photograph: 3 Date: 12/15/2022
Description: Release extent during delineation activities
View: Northwest

Photograph: 4 Date: 12/15/2022
Description: Delineation activities on pad.
View: Southwest

ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name:PH01	Date: 12/15/22
	Site Name: PLU 18 Twin Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03E1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Meredith Roberts	Method: Backhoe
Coordinates: 32.20635, -103.81299	Hole Diameter: ~4"	Total Depth: 4'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Moist	34,429	0.0	Y	SS01	0'	0'	CCHE	0-1' CALICHE, moist, stained and no odor.
Moist	5,499	0.2	N		1'	1'	SP-SM	1-2', SILTY SAND to CLAYEY SAND with caliche, brown to light brown, poorly sorted, moist, no stained and slight odor.
Moist	3,181	5.0	N	PH01	2'	2'	SP-SM	SAA
Moist	2,100	0.1	N		3'	3'	SP-SM	SAA
Moist	<160	0.1	N	PH01A	4'	4'	CCHE	CALICHE, light brown, dry, no stained and no odor.
						TD		Total depth at 4' bgs.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name:PH02	Date: 12/15/22
	Site Name: PLU 18 Twin Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03E1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Meredith Roberts	Method: Backhoe
Coordinates: 32.20635, -103.81299	Hole Diameter: ~4"	Total Depth: 4'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Moist	30,122	0.0	Y	SS02	0'	0'	CCHE	0-1' CALICHE, moist, stained and no odor.
Moist	1,182	0.1	N		1'	1'	SP-SM	1-2', SILTY SAND to CLAYEY SAND with caliche, brownish red, poorly graded, moist, no stained and slight odor.
Moist	1,092	0.0	N		2'	2'	SP-SM	SAA
Dry	474	0.0	N		3'	3'	CCHE	3-4' CALICHE mixed with small amount of sand, light brown, dry, no stained and no odor.
Dry	474	0.0	N	PH02	4'	4'	CCHE	CALICHE, light brown, dry, no stained and no odor.
							TD	Total depth at 4' bgs.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name:PH03	Date: 12/15/22
	Site Name: PLU 18 Twin Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03E1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Meredith Roberts	Method: Backhoe
Coordinates: 32.20635, -103.81299	Hole Diameter: ~4"	Total Depth: 4'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Moist	>34,429	0.0	Y	SS03	0'	0'	CCHE	0-1' CALICHE, moist, stained and no odor.
Moist	1,182	0.8	N		1'	1'	SP	1-2', SILTY SAND mixed with Caliche, brownish red, poorly sorted, moist, no stained and slight odor.
Moist	474	0.2	N		2'	2'	SP	SAA
Moist	174	0.2	N		3'	3'	SP	SAA
Moist	<174	0.1	N	PH03	4'	4'	SP	SAA
							TD	Total depth at 4' bgs.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name:PH04	Date: 12/15/22
	Site Name: PLU 18 Twin Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03E1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Meredith Roberts	Method: Backhoe
Coordinates: 32.20635, -103.81299	Hole Diameter: ~4"	Total Depth: 4'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Moist	>34,429	0.0	Y	SS04	0'	0'	CCHE	0-1' CALICHE, moist, stained and no odor.
Moist	2,516	0.0	N		1'	1'	SP-SM	1-2', SILTY SAND to CLAYEY SAND with caliche, brownish red, poorly graded, moist, no stained and no odor.
Moist	472	0.1	N		2'	2'	SP-SM	SAA with slight odor.
Moist	<174	0.1	N		3'	3'	SP-SM	SAA
Moist	<174	0.1	N	PH04	4'	4'	SP-SM	SAA
							TD	Total depth at 4' bgs.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name:PH05	Date: 12/15/22
	Site Name: PLU 18 Twin Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03E1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Meredith Roberts	Method: Backhoe
Coordinates: 32.20635, -103.81299	Hole Diameter: ~4"	Total Depth: 4'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
					0'	0'		
Moist	1,092	0.1	N		1'	1'	SP-SM	1-2', SILTY SAND to CLAYEY SAND with caliche, brownish red, poorly sorted, moist, no stained with slight odor.
Moist	319	0.0	N		2'	2'	SP-SM	SAA with no odor.
Moist	1,182	0.0	N	PH05	3'	3'	SP-SM	SAA
Moist	700	0.8	N	PH05A	4'	4'	SP-SM	SAA and started to hit hard bedrock and caliche.
							TD	Total depth at 4' bgs.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name:PH06	Date: 12/15/22
	Site Name: PLU 18 Twin Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03E1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Meredith Roberts	Method: Backhoe
Coordinates: 32.20635, -103.81299	Hole Diameter: ~4"	Total Depth: 4'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
					0'	0'		
Moist	924	0.1	Y	PH06	1'	1'	SP-SM	1-2', SILTY SAND to CLAYEY SAND with caliche, brownish red, poorly sorted, moist, stained with slight odor.
Moist	8,456	0.0	N		2'	2'	SP-SM	SAA with no odor and no stained.
Moist	633	0.0	N		3'	3'	SP-SM	SAA
Moist	924	0.0	N	PH06A	4'	4'	SP-SM	SAA and started to hit hard bedrock and caliche.
							TD	Total depth at 4' bgs.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name:PH07	Date: 12/15/22
	Site Name: PLU 18 Twin Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03E1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Meredith Roberts	Method: Backhoe
Coordinates: 32.20635, -103.81299	Hole Diameter: ~4"	Total Depth: 4'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
					0'	0'		
Moist	2,576	0.1	N	PH07	1'	1'	SP-SM	1-2', SILTY SAND to CLAYEY SAND with caliche, brownish red, poorly sorted, moist, no stained with slight odor.
Moist	409	0.0	N		2'	2'	SP-SM	SAA with no odor and no stained.
Moist	474	0.0	N		3'	3'	SP-SM	SAA
Moist	364	0.2	N	PH07A	4'	4'	SP-SM	SAA with calcihe mix.
							TD	Total depth at 4' bgs.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name:PH08	Date: 12/15/22
	Site Name: PLU 18 Twin Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03E1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Meredith Roberts	Method: Backhoe
Coordinates: 32.20635, -103.81299	Hole Diameter: ~4"	Total Depth: 4'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
					0'	0'		
Moist	633	0.1	N	PH08	1'	1'	SP-SM	1-2', SILTY SAND to CLAYEY SAND with caliche, brownish red, poorly sorted, moist, no stained with slight odor.
Moist	633	0.0	N		2'	2'	SP-SM	SAA with no odor.
Moist	474	0.1	N		3'	3'	SP-SM	SAA
Moist	241	0.0	N	PH08A	4'	4'	SP-SM	SAA
							TD	Total depth at 4' bgs.

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Generated 11/28/2022 4:30:50 PM

JOB DESCRIPTION

PLU 18 TWR SAT. Battery
SDG NUMBER 03E1558144

JOB NUMBER

890-3514-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 2/29/2024 4:12:50 PM

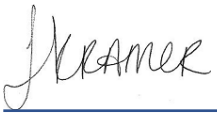
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



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11/28/2022 4:30:50 PM

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

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Laboratory Job ID: 890-3514-1
SDG: 03E1558144

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Definitions/Glossary

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Job ID: 890-3514-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3514-1

Receipt
The samples were received on 11/18/2022 8:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-3514-1), SS02 (890-3514-2), SS03 (890-3514-3) and SS04 (890-3514-4).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40342 and analytical batch 880-40359 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.

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-40137 and analytical batch 880-40032 was outside the upper control limits.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40009 and analytical batch 880-40345 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: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Client Sample ID: SS01

Lab Sample ID: 890-3514-1
Matrix: Solid
Date Collected: 11/16/22 13:20
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/23/22 15:00	11/26/22 03:01	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/23/22 15:00	11/26/22 03:01	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/23/22 15:00	11/26/22 03:01	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/23/22 15:00	11/26/22 03:01	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/23/22 15:00	11/26/22 03:01	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/23/22 15:00	11/26/22 03:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*11/23/22 15:00*	*11/26/22 03:01*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*11/23/22 15:00*	*11/26/22 03:01*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/28/22 16:31	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**66.7**		50.0		mg/Kg			11/22/22 10:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**66.7**		50.0		mg/Kg		11/21/22 17:39	11/21/22 21:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 21:14	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 21:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*11/21/22 17:39*	*11/21/22 21:14*	*1*
o-Terphenyl	*120*		*70 - 130*	*11/21/22 17:39*	*11/21/22 21:14*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**46500**		249		mg/Kg			11/23/22 20:47	50

Client Sample ID: SS02

Lab Sample ID: 890-3514-2
Matrix: Solid
Date Collected: 11/16/22 13:25
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/23/22 15:00	11/26/22 03:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/23/22 15:00	11/26/22 03:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/23/22 15:00	11/26/22 03:22	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		11/23/22 15:00	11/26/22 03:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/23/22 15:00	11/26/22 03:22	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		11/23/22 15:00	11/26/22 03:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*11/23/22 15:00*	*11/26/22 03:22*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Client Sample ID: SS02

Lab Sample ID: 890-3514-2
Matrix: Solid
Date Collected: 11/16/22 13:25
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*11/23/22 15:00*	*11/26/22 03:22*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			11/28/22 16:31	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**139**		50.0	mg/Kg			11/22/22 10:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**78.8**		50.0	mg/Kg		11/21/22 17:39	11/21/22 22:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/21/22 17:39	11/21/22 22:14	1
Oil Range Organics (Over C28-C36)	**60.3**		50.0	mg/Kg		11/21/22 17:39	11/21/22 22:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*100*		*70 - 130*	*11/21/22 17:39*	*11/21/22 22:14*	*1*
o-Terphenyl	*116*		*70 - 130*	*11/21/22 17:39*	*11/21/22 22:14*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**26600**		252	mg/Kg			11/23/22 21:07	50

Client Sample ID: SS03

Lab Sample ID: 890-3514-3
Matrix: Solid
Date Collected: 11/16/22 13:30
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/23/22 15:00	11/26/22 03:42	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/23/22 15:00	11/26/22 03:42	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/23/22 15:00	11/26/22 03:42	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		11/23/22 15:00	11/26/22 03:42	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/23/22 15:00	11/26/22 03:42	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		11/23/22 15:00	11/26/22 03:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*11/23/22 15:00*	*11/26/22 03:42*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*11/23/22 15:00*	*11/26/22 03:42*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			11/28/22 16:31	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Client Sample ID: SS03

Lab Sample ID: 890-3514-3
Matrix: Solid
Date Collected: 11/16/22 13:30
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**65.4**		49.8		mg/Kg			11/22/22 10:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**65.4**		49.8		mg/Kg		11/21/22 17:39	11/21/22 22:34	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		11/21/22 17:39	11/21/22 22:34	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		11/21/22 17:39	11/21/22 22:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*11/21/22 17:39*	*11/21/22 22:34*	*1*
o-Terphenyl	*125*		*70 - 130*	*11/21/22 17:39*	*11/21/22 22:34*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**26900**		252		mg/Kg			11/23/22 21:13	50

Client Sample ID: SS04

Lab Sample ID: 890-3514-4
Matrix: Solid
Date Collected: 11/16/22 13:35
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		11/23/22 15:00	11/26/22 04:03	1
Toluene	<0.00202	U	0.00202		mg/Kg		11/23/22 15:00	11/26/22 04:03	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		11/23/22 15:00	11/26/22 04:03	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		11/23/22 15:00	11/26/22 04:03	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		11/23/22 15:00	11/26/22 04:03	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		11/23/22 15:00	11/26/22 04:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*11/23/22 15:00*	*11/26/22 04:03*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*11/23/22 15:00*	*11/26/22 04:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			11/28/22 16:31	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**67.2**		50.0		mg/Kg			11/22/22 10:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**67.2**		50.0		mg/Kg		11/21/22 17:39	11/21/22 22:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 22:55	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 22:55	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Client Sample ID: SS04
Date Collected: 11/16/22 13:35
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

Lab Sample ID: 890-3514-4
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130	11/21/22 17:39	11/21/22 22:55	1
o-Terphenyl	122		70 - 130	11/21/22 17:39	11/21/22 22:55	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	38000		250	mg/Kg			11/23/22 21:20	50

Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

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)
880-21869-A-11-A MS	Matrix Spike	100	110
880-21869-A-11-B MSD	Matrix Spike Duplicate	99	112
890-3514-1	SS01	89	112
890-3514-2	SS02	93	105
890-3514-3	SS03	91	105
890-3514-4	SS04	90	107
LCS 880-40342/1-A	Lab Control Sample	99	109
LCSD 880-40342/2-A	Lab Control Sample Dup	102	112
MB 880-40342/5-A	Method Blank	81	105

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-3514-1	SS01	99	120
890-3514-1 MS	SS01	117	119
890-3514-1 MSD	SS01	115	113
890-3514-2	SS02	100	116
890-3514-3	SS03	105	125
890-3514-4	SS04	104	122
LCS 880-40137/2-A	Lab Control Sample	89	101
LCSD 880-40137/3-A	Lab Control Sample Dup	91	101
MB 880-40137/1-A	Method Blank	129	154 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40342/5-A
Matrix: Solid
Analysis Batch: 40359

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40342

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/23/22 15:00	11/25/22 21:07	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/23/22 15:00	11/25/22 21:07	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/23/22 15:00	11/25/22 21:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/23/22 15:00	11/25/22 21:07	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/23/22 15:00	11/25/22 21:07	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/23/22 15:00	11/25/22 21:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*11/23/22 15:00*	*11/25/22 21:07*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*11/23/22 15:00*	*11/25/22 21:07*	*1*

Lab Sample ID: LCS 880-40342/1-A
Matrix: Solid
Analysis Batch: 40359

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40342

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08346		mg/Kg		83	70 - 130		
Toluene			0.100	0.07785		mg/Kg		78	70 - 130		
Ethylbenzene			0.100	0.07618		mg/Kg		76	70 - 130		
m-Xylene & p-Xylene			0.200	0.1590		mg/Kg		80	70 - 130		
o-Xylene			0.100	0.07942		mg/Kg		79	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: LCSD 880-40342/2-A
Matrix: Solid
Analysis Batch: 40359

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40342

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09447		mg/Kg		94	70 - 130	12	35
Toluene			0.100	0.08780		mg/Kg		88	70 - 130	12	35
Ethylbenzene			0.100	0.08423		mg/Kg		84	70 - 130	10	35
m-Xylene & p-Xylene			0.200	0.1744		mg/Kg		87	70 - 130	9	35
o-Xylene			0.100	0.08685		mg/Kg		87	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 880-21869-A-11-A MS
Matrix: Solid
Analysis Batch: 40359

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40342

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U F1 F2	0.101	0.06412	F1	mg/Kg		64	70 - 130		
Toluene	<0.00202	U F1 F2	0.101	0.05662	F1	mg/Kg		56	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

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

Lab Sample ID: 880-21869-A-11-A MS
Matrix: Solid
Analysis Batch: 40359

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40342

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Ethylbenzene	<0.00202	U F1 F2	0.101	0.04955	F1	mg/Kg		49	70 - 130		
m-Xylene & p-Xylene	<0.00404	U F1 F2	0.202	0.1000	F1	mg/Kg		50	70 - 130		
o-Xylene	<0.00202	U F1 F2	0.101	0.04977	F1	mg/Kg		49	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 880-21869-A-11-B MSD
Matrix: Solid
Analysis Batch: 40359

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40342

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U F1 F2	0.0994	0.01853	F1 F2	mg/Kg		19	70 - 130	110	35
Toluene	<0.00202	U F1 F2	0.0994	0.01354	F1 F2	mg/Kg		14	70 - 130	123	35
Ethylbenzene	<0.00202	U F1 F2	0.0994	0.008815	F1 F2	mg/Kg		9	70 - 130	140	35
m-Xylene & p-Xylene	<0.00404	U F1 F2	0.199	0.01508	F1 F2	mg/Kg		8	70 - 130	148	35
o-Xylene	<0.00202	U F1 F2	0.0994	0.008268	F1 F2	mg/Kg		8	70 - 130	143	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

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

Lab Sample ID: MB 880-40137/1-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40137

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		11/21/22 17:39	11/21/22 20:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*
o-Terphenyl	*154*	*S1+*	*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*

Lab Sample ID: LCS 880-40137/2-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1114		mg/Kg		111	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1081		mg/Kg		108	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

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

Lab Sample ID: LCS 880-40137/2-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: LCSD 880-40137/3-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1121		mg/Kg		112	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1074		mg/Kg		107	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: 890-3514-1 MS
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 40137

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	66.7		998	1181		mg/Kg		112	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1041		mg/Kg		104	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	117		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: 890-3514-1 MSD
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 40137

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	66.7		997	1183		mg/Kg		112	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	1016		mg/Kg		102	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	113		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40009/1-A
Matrix: Solid
Analysis Batch: 40345

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			11/23/22 18:29	1

Lab Sample ID: LCS 880-40009/2-A
Matrix: Solid
Analysis Batch: 40345

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	262.5		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-40009/3-A
Matrix: Solid
Analysis Batch: 40345

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	260.9		mg/Kg		104	90 - 110	1	20

Lab Sample ID: 890-3513-A-1-B MS
Matrix: Solid
Analysis Batch: 40345

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	1160		250	1349	4	mg/Kg		76	90 - 110		

Lab Sample ID: 890-3513-A-1-C MSD
Matrix: Solid
Analysis Batch: 40345

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	1160		250	1331	4	mg/Kg		69	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

GC VOA

Prep Batch: 40342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3514-1	SS01	Total/NA	Solid	5035	
890-3514-2	SS02	Total/NA	Solid	5035	
890-3514-3	SS03	Total/NA	Solid	5035	
890-3514-4	SS04	Total/NA	Solid	5035	
MB 880-40342/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40342/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40342/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-21869-A-11-A MS	Matrix Spike	Total/NA	Solid	5035	
880-21869-A-11-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3514-1	SS01	Total/NA	Solid	8021B	40342
890-3514-2	SS02	Total/NA	Solid	8021B	40342
890-3514-3	SS03	Total/NA	Solid	8021B	40342
890-3514-4	SS04	Total/NA	Solid	8021B	40342
MB 880-40342/5-A	Method Blank	Total/NA	Solid	8021B	40342
LCS 880-40342/1-A	Lab Control Sample	Total/NA	Solid	8021B	40342
LCSD 880-40342/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40342
880-21869-A-11-A MS	Matrix Spike	Total/NA	Solid	8021B	40342
880-21869-A-11-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40342

Analysis Batch: 40512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3514-1	SS01	Total/NA	Solid	Total BTEX	
890-3514-2	SS02	Total/NA	Solid	Total BTEX	
890-3514-3	SS03	Total/NA	Solid	Total BTEX	
890-3514-4	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 40032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3514-1	SS01	Total/NA	Solid	8015B NM	40137
890-3514-2	SS02	Total/NA	Solid	8015B NM	40137
890-3514-3	SS03	Total/NA	Solid	8015B NM	40137
890-3514-4	SS04	Total/NA	Solid	8015B NM	40137
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015B NM	40137
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40137
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40137
890-3514-1 MS	SS01	Total/NA	Solid	8015B NM	40137
890-3514-1 MSD	SS01	Total/NA	Solid	8015B NM	40137

Prep Batch: 40137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3514-1	SS01	Total/NA	Solid	8015NM Prep	
890-3514-2	SS02	Total/NA	Solid	8015NM Prep	
890-3514-3	SS03	Total/NA	Solid	8015NM Prep	
890-3514-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

GC Semi VOA (Continued)

Prep Batch: 40137 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3514-1 MS	SS01	Total/NA	Solid	8015NM Prep	
890-3514-1 MSD	SS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3514-1	SS01	Total/NA	Solid	8015 NM	
890-3514-2	SS02	Total/NA	Solid	8015 NM	
890-3514-3	SS03	Total/NA	Solid	8015 NM	
890-3514-4	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 40009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3514-1	SS01	Soluble	Solid	DI Leach	
890-3514-2	SS02	Soluble	Solid	DI Leach	
890-3514-3	SS03	Soluble	Solid	DI Leach	
890-3514-4	SS04	Soluble	Solid	DI Leach	
MB 880-40009/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40009/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40009/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3513-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3513-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 40345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3514-1	SS01	Soluble	Solid	300.0	40009
890-3514-2	SS02	Soluble	Solid	300.0	40009
890-3514-3	SS03	Soluble	Solid	300.0	40009
890-3514-4	SS04	Soluble	Solid	300.0	40009
MB 880-40009/1-A	Method Blank	Soluble	Solid	300.0	40009
LCS 880-40009/2-A	Lab Control Sample	Soluble	Solid	300.0	40009
LCSD 880-40009/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40009
890-3513-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	40009
890-3513-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	40009

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Client Sample ID: SS01
Date Collected: 11/16/22 13:20
Date Received: 11/18/22 08:20

Lab Sample ID: 890-3514-1
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	40342	11/23/22 15:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40359	11/26/22 03:01	EL	EET MID
Total/NA	Analysis	Total BTEX		1			40512	11/28/22 16:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			40187	11/22/22 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	40137	11/21/22 17:39	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40032	11/21/22 21:14	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	40009	11/20/22 12:19	CH	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	40345	11/23/22 20:47	CH	EET MID

Client Sample ID: SS02
Date Collected: 11/16/22 13:25
Date Received: 11/18/22 08:20

Lab Sample ID: 890-3514-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	40342	11/23/22 15:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40359	11/26/22 03:22	EL	EET MID
Total/NA	Analysis	Total BTEX		1			40512	11/28/22 16:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			40187	11/22/22 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	40137	11/21/22 17:39	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40032	11/21/22 22:14	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	40009	11/20/22 12:19	CH	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	40345	11/23/22 21:07	CH	EET MID

Client Sample ID: SS03
Date Collected: 11/16/22 13:30
Date Received: 11/18/22 08:20

Lab Sample ID: 890-3514-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	40342	11/23/22 15:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40359	11/26/22 03:42	EL	EET MID
Total/NA	Analysis	Total BTEX		1			40512	11/28/22 16:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			40187	11/22/22 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	40137	11/21/22 17:39	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40032	11/21/22 22:34	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	40009	11/20/22 12:19	CH	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	40345	11/23/22 21:13	CH	EET MID

Client Sample ID: SS04
Date Collected: 11/16/22 13:35
Date Received: 11/18/22 08:20

Lab Sample ID: 890-3514-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	40342	11/23/22 15:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40359	11/26/22 04:03	EL	EET MID
Total/NA	Analysis	Total BTEX		1			40512	11/28/22 16:31	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Client Sample ID: SS04

Date Collected: 11/16/22 13:35
Date Received: 11/18/22 08:20

Lab Sample ID: 890-3514-4

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			40187	11/22/22 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	40137	11/21/22 17:39	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40032	11/21/22 22:55	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	40009	11/20/22 12:19	CH	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	40345	11/23/22 21:20	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: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

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: PLU 18 TWR SAT. Battery

Job ID: 890-3514-1
SDG: 03E1558144

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3514-1	SS01	Solid	11/16/22 13:20	11/18/22 08:20	0.5'
890-3514-2	SS02	Solid	11/16/22 13:25	11/18/22 08:20	0.5'
890-3514-3	SS03	Solid	11/16/22 13:30	11/18/22 08:20	0.5'
890-3514-4	SS04	Solid	11/16/22 13:35	11/18/22 08:20	0.5'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	PLU 18 TWR Sat. Battery	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558144	Pres. Code	
Project Location:	32.20635, -103.81299	Due Date:	
Sampler's Name:	MeredithRoberts	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	TWM007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.4	
Total Containers:		Corrected Temperature:	4.2	

ANALYSIS REQUEST

Parameters: Chlorides, BTEX, TPH

890-3514 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 Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Chlorides	BTEX	TPH	Sample Comments
SS01	S	11/16/22	1320	0.5'	G	1	X	X	X	Incident#: nAPP2230551957
SS02	↓	↓	1325	↓	↓	↓	↓	↓	↓	
SS03			1330							
SS04			1335							Cost Center: 2111031001

→ ME

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	Meaze	Clee Up	11.18.22820			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 11/10/2023 1:29:49 PM

Released to Imaging: 2/29/2024 4:12:50 PM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3514-1
SDG Number: 03E1558144

Login Number: 3514
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3514-1
SDG Number: 03E1558144

Login Number: 3514
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 11/21/22 08:46 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Generated 11/29/2022 8:52:46 AM

JOB DESCRIPTION

PLU 18 TWR Sat Battery
SDG NUMBER 03E1558144

JOB NUMBER

890-3515-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 2/29/2024 4:12:50 PM

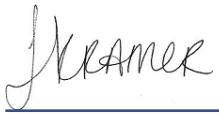
my EOL

Eurofins Carlsbad

Job Notes

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

Authorization



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11/29/2022 8:52:46 AM

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

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Laboratory Job ID: 890-3515-1
SDG: 03E1558144

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Definitions/Glossary

Client: Ensolum Job ID: 890-3515-1
Project/Site: PLU 18 TWR Sat Battery SDG: 03E1558144

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

Job ID: 890-3515-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3515-1

Receipt
The sample was received on 11/18/2022 8:20 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 4.2°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SS05 (890-3515-1).

GC VOA
Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-40412 and analytical batch 880-40361 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-40137 and analytical batch 880-40032 was outside the upper control limits.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40009 and analytical batch 880-40345 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: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

Client Sample ID: SS05

Date Collected: 11/16/22 13:00
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

Lab Sample ID: 890-3515-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/28/22 10:23	11/28/22 18:53	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/28/22 10:23	11/28/22 18:53	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/28/22 10:23	11/28/22 18:53	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/28/22 10:23	11/28/22 18:53	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/28/22 10:23	11/28/22 18:53	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/28/22 10:23	11/28/22 18:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*11/28/22 10:23*	*11/28/22 18:53*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*11/28/22 10:23*	*11/28/22 18:53*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/29/22 09:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/22/22 10:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/21/22 17:39	11/21/22 23:15	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/21/22 17:39	11/21/22 23:15	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/21/22 17:39	11/21/22 23:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*11/21/22 17:39*	*11/21/22 23:15*	*1*
o-Terphenyl	*105*		*70 - 130*	*11/21/22 17:39*	*11/21/22 23:15*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**18.1**		4.98		mg/Kg			11/23/22 21:27	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

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)
880-21724-A-1-B MS	Matrix Spike	86	105
880-21724-A-1-C MSD	Matrix Spike Duplicate	87	110
890-3515-1	SS05	104	114
LCS 880-40412/1-A	Lab Control Sample	86	107
LCSD 880-40412/2-A	Lab Control Sample Dup	88	101
MB 880-40412/5-A	Method Blank	74	110

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)
890-3514-A-1-C MS	Matrix Spike	117	119
890-3514-A-1-D MSD	Matrix Spike Duplicate	115	113
890-3515-1	SS05	93	105
LCS 880-40137/2-A	Lab Control Sample	89	101
LCSD 880-40137/3-A	Lab Control Sample Dup	91	101
MB 880-40137/1-A	Method Blank	129	154 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40412/5-A
Matrix: Solid
Analysis Batch: 40361

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40412

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/28/22 10:23	11/28/22 12:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/28/22 10:23	11/28/22 12:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/28/22 10:23	11/28/22 12:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/28/22 10:23	11/28/22 12:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/28/22 10:23	11/28/22 12:29	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/28/22 10:23	11/28/22 12:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*11/28/22 10:23*	*11/28/22 12:29*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*11/28/22 10:23*	*11/28/22 12:29*	*1*

Lab Sample ID: LCS 880-40412/1-A
Matrix: Solid
Analysis Batch: 40361

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40412

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09831		mg/Kg		98	70 - 130		
Toluene			0.100	0.1061		mg/Kg		106	70 - 130		
Ethylbenzene			0.100	0.09887		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.1767		mg/Kg		88	70 - 130		
o-Xylene			0.100	0.08535		mg/Kg		85	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-40412/2-A
Matrix: Solid
Analysis Batch: 40361

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40412

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1104		mg/Kg		110	70 - 130	12	35
Toluene			0.100	0.1243		mg/Kg		124	70 - 130	16	35
Ethylbenzene			0.100	0.1190		mg/Kg		119	70 - 130	18	35
m-Xylene & p-Xylene			0.200	0.2122		mg/Kg		106	70 - 130	18	35
o-Xylene			0.100	0.1020		mg/Kg		102	70 - 130	18	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 880-21724-A-1-B MS
Matrix: Solid
Analysis Batch: 40361

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40412

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.100	0.09140		mg/Kg		91	70 - 130		
Toluene	<0.00201	U	0.100	0.09742		mg/Kg		97	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

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

Lab Sample ID: 880-21724-A-1-B MS
Matrix: Solid
Analysis Batch: 40361

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40412

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.100	0.09031		mg/Kg		90	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.201	0.1585		mg/Kg		79	70 - 130
o-Xylene	<0.00201	U F1	0.100	0.07634		mg/Kg		76	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 880-21724-A-1-C MSD
Matrix: Solid
Analysis Batch: 40361

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40412

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0996	0.08592		mg/Kg		86	70 - 130	6	35
Toluene	<0.00201	U	0.0996	0.08873		mg/Kg		89	70 - 130	9	35
Ethylbenzene	<0.00201	U	0.0996	0.07959		mg/Kg		80	70 - 130	13	35
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1406		mg/Kg		71	70 - 130	12	35
o-Xylene	<0.00201	U F1	0.0996	0.06861	F1	mg/Kg		68	70 - 130	11	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

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

Lab Sample ID: MB 880-40137/1-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40137

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		11/21/22 17:39	11/21/22 20:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*
o-Terphenyl	*154*	*S1+*	*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*

Lab Sample ID: LCS 880-40137/2-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1114		mg/Kg		111	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1081		mg/Kg		108	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

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

Lab Sample ID: LCS 880-40137/2-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: LCSD 880-40137/3-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1121		mg/Kg		112	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1074		mg/Kg		107	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: 890-3514-A-1-C MS
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40137

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	66.7		998	1181		mg/Kg		112	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1041		mg/Kg		104	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	117		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: 890-3514-A-1-D MSD
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40137

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	66.7		997	1183		mg/Kg		112	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	1016		mg/Kg		102	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	113		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40009/1-A
Matrix: Solid
Analysis Batch: 40345

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			11/23/22 18:29	1

Lab Sample ID: LCS 880-40009/2-A
Matrix: Solid
Analysis Batch: 40345

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	262.5		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-40009/3-A
Matrix: Solid
Analysis Batch: 40345

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	260.9		mg/Kg		104	90 - 110	1	20

Lab Sample ID: 890-3513-A-1-B MS
Matrix: Solid
Analysis Batch: 40345

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	1160		250	1349	4	mg/Kg		76	90 - 110		

Lab Sample ID: 890-3513-A-1-C MSD
Matrix: Solid
Analysis Batch: 40345

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	1160		250	1331	4	mg/Kg		69	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

GC VOA

Analysis Batch: 40361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3515-1	SS05	Total/NA	Solid	8021B	40412
MB 880-40412/5-A	Method Blank	Total/NA	Solid	8021B	40412
LCS 880-40412/1-A	Lab Control Sample	Total/NA	Solid	8021B	40412
LCSD 880-40412/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40412
880-21724-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	40412
880-21724-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40412

Prep Batch: 40412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3515-1	SS05	Total/NA	Solid	5035	
MB 880-40412/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40412/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40412/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-21724-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-21724-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3515-1	SS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 40032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3515-1	SS05	Total/NA	Solid	8015B NM	40137
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015B NM	40137
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40137
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40137
890-3514-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	40137
890-3514-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	40137

Prep Batch: 40137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3515-1	SS05	Total/NA	Solid	8015NM Prep	
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3514-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3514-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3515-1	SS05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 40009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3515-1	SS05	Soluble	Solid	DI Leach	
MB 880-40009/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40009/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40009/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

HPLC/IC (Continued)

Leach Batch: 40009 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3513-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3513-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 40345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3515-1	SS05	Soluble	Solid	300.0	40009
MB 880-40009/1-A	Method Blank	Soluble	Solid	300.0	40009
LCS 880-40009/2-A	Lab Control Sample	Soluble	Solid	300.0	40009
LCSD 880-40009/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40009
890-3513-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	40009
890-3513-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	40009

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

Client Sample ID: SS05
Date Collected: 11/16/22 13:00
Date Received: 11/18/22 08:20

Lab Sample ID: 890-3515-1
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	40412	11/28/22 10:23	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40361	11/28/22 18:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40565	11/29/22 09:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			40188	11/22/22 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	40137	11/21/22 17:39	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40032	11/21/22 23:15	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	40009	11/20/22 12:19	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40345	11/23/22 21:27	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: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

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: PLU 18 TWR Sat Battery

Job ID: 890-3515-1
SDG: 03E1558144

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3515-1	SS05	Solid	11/16/22 13:00	11/18/22 08:20	0.5'

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11/29/2022

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	PLU 18 TWR Sat. Battery	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558144	Due Date:	
Project Location:	32.20635, -103.81299	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Meredith Roberts		
PO #:			

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	Thmo 07	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.4	
Total Containers:		Corrected Temperature:	4.2	

ANALYSIS REQUEST

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Chlorides	BTEX	TPH		Sample Comments
SS05	S	11/16/22	1300	0.5'	G	1		X	X	X	MR	Incident #: nAPP2230551957
												Cost Center: 211103I001

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			11.18.22 820			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 11/10/2023 1:29:49 PM

Released to Imaging: 2/29/2024 4:12:50 PM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3515-1
SDG Number: 03E1558144

Login Number: 3515
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3515-1
SDG Number: 03E1558144

Login Number: 3515
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 11/21/22 08:46 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Generated 11/30/2022 9:49:44 AM

JOB DESCRIPTION

PLU 18 TWR Sat Battery
SDG NUMBER 03E1558144

JOB NUMBER

890-3517-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 2/29/2024 4:12:50 PM

my EOL

Eurofins Carlsbad

Job Notes

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

Authorization

Generated
11/30/2022 9:49:44 AM

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

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Laboratory Job ID: 890-3517-1
SDG: 03E1558144

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Definitions/Glossary

Client: Ensolum Job ID: 890-3517-1
Project/Site: PLU 18 TWR Sat Battery SDG: 03E1558144

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

Job ID: 890-3517-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3517-1

Receipt
The sample was received on 11/18/2022 8:20 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 4.2°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SS06 (890-3517-1).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-3493-A-1-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40432 and analytical batch 880-40541 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.

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-40137 and analytical batch 880-40032 was outside the upper control limits.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-40009 and analytical batch 880-40345 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: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

Client Sample ID: SS06

Date Collected: 11/16/22 13:05
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

Lab Sample ID: 890-3517-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/28/22 10:35	11/30/22 01:42	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/28/22 10:35	11/30/22 01:42	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/28/22 10:35	11/30/22 01:42	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/28/22 10:35	11/30/22 01:42	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/28/22 10:35	11/30/22 01:42	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/28/22 10:35	11/30/22 01:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*11/28/22 10:35*	*11/30/22 01:42*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*11/28/22 10:35*	*11/30/22 01:42*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/30/22 09:51	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/22/22 10:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 23:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 23:55	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 23:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*11/21/22 17:39*	*11/21/22 23:55*	*1*
o-Terphenyl	*111*		*70 - 130*	*11/21/22 17:39*	*11/21/22 23:55*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**35.2**		4.96		mg/Kg			11/23/22 21:40	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-3493-A-1-D MS	Matrix Spike	72	104
890-3493-A-1-E MSD	Matrix Spike Duplicate	69 S1-	102
890-3517-1	SS06	78	106
LCS 880-40432/1-A	Lab Control Sample	91	109
LCSD 880-40432/2-A	Lab Control Sample Dup	87	109
MB 880-40432/5-A	Method Blank	73	110
MB 880-40470/5-A	Method Blank	72	109

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-3514-A-1-C MS	Matrix Spike	117	119
890-3514-A-1-D MSD	Matrix Spike Duplicate	115	113
890-3517-1	SS06	99	111
LCS 880-40137/2-A	Lab Control Sample	89	101
LCSD 880-40137/3-A	Lab Control Sample Dup	91	101
MB 880-40137/1-A	Method Blank	129	154 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40432/5-A
Matrix: Solid
Analysis Batch: 40541

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40432

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/28/22 10:35	11/29/22 23:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/28/22 10:35	11/29/22 23:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/28/22 10:35	11/29/22 23:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/28/22 10:35	11/29/22 23:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/28/22 10:35	11/29/22 23:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/28/22 10:35	11/29/22 23:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*73*		*70 - 130*	*11/28/22 10:35*	*11/29/22 23:50*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*11/28/22 10:35*	*11/29/22 23:50*	*1*

Lab Sample ID: LCS 880-40432/1-A
Matrix: Solid
Analysis Batch: 40541

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40432

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09748		mg/Kg		97	70 - 130		
Toluene			0.100	0.1040		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.09734		mg/Kg		97	70 - 130		
m-Xylene & p-Xylene			0.200	0.1695		mg/Kg		85	70 - 130		
o-Xylene			0.100	0.08489		mg/Kg		85	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: LCSD 880-40432/2-A
Matrix: Solid
Analysis Batch: 40541

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40432

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1091		mg/Kg		109	70 - 130	11	35
Toluene			0.100	0.1113		mg/Kg		111	70 - 130	7	35
Ethylbenzene			0.100	0.1029		mg/Kg		103	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1785		mg/Kg		89	70 - 130	5	35
o-Xylene			0.100	0.08844		mg/Kg		88	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 890-3493-A-1-D MS
Matrix: Solid
Analysis Batch: 40541

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40432

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U F1 F2	0.0996	0.02627	F1	mg/Kg		26	70 - 130		
Toluene	<0.00201	U F1 F2	0.0996	0.02749	F1	mg/Kg		28	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

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

Lab Sample ID: 890-3493-A-1-D MS
Matrix: Solid
Analysis Batch: 40541

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40432

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U F1 F2	0.0996	0.03012	F1	mg/Kg		30	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.199	0.05464	F1	mg/Kg		27	70 - 130
o-Xylene	<0.00201	U F1	0.0996	0.03019	F1	mg/Kg		30	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 890-3493-A-1-E MSD
Matrix: Solid
Analysis Batch: 40541

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40432

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1 F2	0.100	0.04789	F1 F2	mg/Kg		48	70 - 130	58	35
Toluene	<0.00201	U F1 F2	0.100	0.04517	F1 F2	mg/Kg		45	70 - 130	49	35
Ethylbenzene	<0.00201	U F1 F2	0.100	0.04427	F1 F2	mg/Kg		44	70 - 130	38	35
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.200	0.08197	F1 F2	mg/Kg		41	70 - 130	40	35
o-Xylene	<0.00201	U F1	0.100	0.04193	F1	mg/Kg		41	70 - 130	33	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*69*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: MB 880-40470/5-A
Matrix: Solid
Analysis Batch: 40541

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40470

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/28/22 14:18	11/29/22 12:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/28/22 14:18	11/29/22 12:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/28/22 14:18	11/29/22 12:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/28/22 14:18	11/29/22 12:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/28/22 14:18	11/29/22 12:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/28/22 14:18	11/29/22 12:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*	*11/28/22 14:18*	*11/29/22 12:12*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*11/28/22 14:18*	*11/29/22 12:12*	*1*

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

Lab Sample ID: MB 880-40137/1-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40137

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		11/21/22 17:39	11/21/22 20:13	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

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

Lab Sample ID: MB 880-40137/1-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40137

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		11/21/22 17:39	11/21/22 20:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*
o-Terphenyl	*154*	*S1+*	*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*

Lab Sample ID: LCS 880-40137/2-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1114		mg/Kg		111	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1081		mg/Kg		108	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*101*		*70 - 130*

Lab Sample ID: LCSD 880-40137/3-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1121		mg/Kg		112	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1074		mg/Kg		107	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*91*		*70 - 130*
o-Terphenyl	*101*		*70 - 130*

Lab Sample ID: 890-3514-A-1-C MS
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40137

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	66.7		998	1181		mg/Kg		112	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1041		mg/Kg		104	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*117*		*70 - 130*
o-Terphenyl	*119*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

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

Lab Sample ID: 890-3514-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 40032 — **Prep Batch: 40137**

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	66.7		997	1183		mg/Kg		112	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	1016		mg/Kg		102	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*115*		*70 - 130*
o-Terphenyl	*113*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40009/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 40345

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/23/22 18:29	1

Lab Sample ID: LCS 880-40009/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 40345

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	262.5		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-40009/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 40345

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	260.9		mg/Kg		104	90 - 110	1	20

Lab Sample ID: 890-3513-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 40345

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	1160		250	1349	4	mg/Kg		76	90 - 110		

Lab Sample ID: 890-3513-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 40345

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1160		250	1331	4	mg/Kg		69	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

GC VOA

Prep Batch: 40432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3517-1	SS06	Total/NA	Solid	5035	
MB 880-40432/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40432/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40432/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3493-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-3493-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 40470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-40470/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 40541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3517-1	SS06	Total/NA	Solid	8021B	40432
MB 880-40432/5-A	Method Blank	Total/NA	Solid	8021B	40432
MB 880-40470/5-A	Method Blank	Total/NA	Solid	8021B	40470
LCS 880-40432/1-A	Lab Control Sample	Total/NA	Solid	8021B	40432
LCSD 880-40432/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40432
890-3493-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	40432
890-3493-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40432

Analysis Batch: 40672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3517-1	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 40032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3517-1	SS06	Total/NA	Solid	8015B NM	40137
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015B NM	40137
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40137
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40137
890-3514-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	40137
890-3514-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	40137

Prep Batch: 40137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3517-1	SS06	Total/NA	Solid	8015NM Prep	
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3514-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3514-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3517-1	SS06	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

HPLC/IC

Leach Batch: 40009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3517-1	SS06	Soluble	Solid	DI Leach	
MB 880-40009/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40009/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40009/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3513-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3513-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 40345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3517-1	SS06	Soluble	Solid	300.0	40009
MB 880-40009/1-A	Method Blank	Soluble	Solid	300.0	40009
LCS 880-40009/2-A	Lab Control Sample	Soluble	Solid	300.0	40009
LCSD 880-40009/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40009
890-3513-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	40009
890-3513-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	40009

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

Client Sample ID: SS06

Date Collected: 11/16/22 13:05
Date Received: 11/18/22 08:20

Lab Sample ID: 890-3517-1

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	40432	11/28/22 10:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40541	11/30/22 01:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40672	11/30/22 09:51	SM	EET MID
Total/NA	Analysis	8015 NM		1			40190	11/22/22 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	40137	11/21/22 17:39	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40032	11/21/22 23:55	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	40009	11/20/22 12:19	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40345	11/23/22 21:40	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

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: PLU 18 TWR Sat Battery

Job ID: 890-3517-1
SDG: 03E1558144

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3517-1	SS06	Solid	11/16/22 13:05	11/18/22 08:20	0.5'

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eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337-257-8307	Email:	tmorrissey@ensolum.com

Work Order Comments

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

Project Name:	PLU 18 TWR Sat. Battery	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558144	Due Date:	
Project Location:	32.20635, -103.81299	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Meredith Roberts		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	NM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.4
Total Containers:		Corrected Temperature:	4.2

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Chlorides	BTEX	TPH	Sample Comments
SS06	S	11/16/22	1305	0.5'	G	1	X	X	X	Incident #: nAPP2230551957
										Cost Center: 211031001

890-3517 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		11-15-22 820	4		
3			6		
5					

Revised Date 08/25/2020 Rev 2020.2

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11/30/2022
Received by OCD: 11/10/2023 1:29:49 PM
Released to Imaging: 2/29/2024 4:12:50 PM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3517-1
SDG Number: 03E1558144

Login Number: 3517
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3517-1
SDG Number: 03E1558144

Login Number: 3517
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 11/21/22 08:46 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Generated 11/29/2022 8:53:52 AM

JOB DESCRIPTION

PLU 18 TWR Sat Battery
SDG NUMBER 03E1558144

JOB NUMBER

890-3519-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 2/29/2024 4:12:30 PM

my EOL

Eurofins Carlsbad

Job Notes

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

Authorization

Generated
11/29/2022 8:53:52 AM

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

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Laboratory Job ID: 890-3519-1
SDG: 03E1558144

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Definitions/Glossary

Client: Ensolum Job ID: 890-3519-1
Project/Site: PLU 18 TWR Sat Battery SDG: 03E1558144

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

Job ID: 890-3519-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3519-1

Receipt
The sample was received on 11/18/2022 8:20 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 4.2°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SS07 (890-3519-1).

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: The surrogate recovery for the blank associated with preparation batch 880-40137 and analytical batch 880-40032 was outside the upper control limits.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

Client Sample ID: SS07

Date Collected: 11/16/22 13:10
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

Lab Sample ID: 890-3519-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 19:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 19:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 19:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/28/22 09:59	11/28/22 19:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 19:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/28/22 09:59	11/28/22 19:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*11/28/22 09:59*	*11/28/22 19:25*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*11/28/22 09:59*	*11/28/22 19:25*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			11/29/22 09:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/22/22 10:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/22/22 00:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/22/22 00:35	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/22/22 00:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*11/21/22 17:39*	*11/22/22 00:35*	*1*
o-Terphenyl	*106*		*70 - 130*	*11/21/22 17:39*	*11/22/22 00:35*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**57.9**		4.98		mg/Kg			11/23/22 19:35	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

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)										
890-3503-A-1-C MS	Matrix Spike	105	110										
890-3503-A-1-D MSD	Matrix Spike Duplicate	100	110										
890-3519-1	SS07	104	102										
LCS 880-40407/1-A	Lab Control Sample	107	105										
LCSD 880-40407/2-A	Lab Control Sample Dup	103	114										
MB 880-40407/5-A	Method Blank	80	103										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-3514-A-1-C MS	Matrix Spike	117	119										
890-3514-A-1-D MSD	Matrix Spike Duplicate	115	113										
890-3519-1	SS07	96	106										
LCS 880-40137/2-A	Lab Control Sample	89	101										
LCSD 880-40137/3-A	Lab Control Sample Dup	91	101										
MB 880-40137/1-A	Method Blank	129	154 S1+										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40407/5-A
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40407

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/28/22 09:59	11/28/22 12:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*11/28/22 09:59*	*11/28/22 12:11*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*11/28/22 09:59*	*11/28/22 12:11*	*1*

Lab Sample ID: LCS 880-40407/1-A
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40407

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	0.1006		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.1080		mg/Kg		108	70 - 130		
m-Xylene & p-Xylene			0.200	0.2161		mg/Kg		108	70 - 130		
o-Xylene			0.100	0.1070		mg/Kg		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 880-40407/2-A
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40407

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1068		mg/Kg		107	70 - 130	13	35
Toluene			0.100	0.1006		mg/Kg		101	70 - 130	0	35
Ethylbenzene			0.100	0.1024		mg/Kg		102	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.2084		mg/Kg		104	70 - 130	4	35
o-Xylene			0.100	0.1031		mg/Kg		103	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: 890-3503-A-1-C MS
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40407

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.100	0.09904		mg/Kg		99	70 - 130		
Toluene	<0.00201	U	0.100	0.08596		mg/Kg		86	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

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

Lab Sample ID: 890-3503-A-1-C MS
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40407

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.100	0.08173		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.201	0.1679		mg/Kg		84	70 - 130
o-Xylene	<0.00201	U	0.100	0.08293		mg/Kg		83	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 890-3503-A-1-D MSD
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40407

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0990	0.1026		mg/Kg		104	70 - 130	3	35
Toluene	<0.00201	U	0.0990	0.09200		mg/Kg		93	70 - 130	7	35
Ethylbenzene	<0.00201	U	0.0990	0.08517		mg/Kg		86	70 - 130	4	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1742		mg/Kg		88	70 - 130	4	35
o-Xylene	<0.00201	U	0.0990	0.08588		mg/Kg		87	70 - 130	3	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

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

Lab Sample ID: MB 880-40137/1-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40137

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		11/21/22 17:39	11/21/22 20:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*
o-Terphenyl	*154*	*S1+*	*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*

Lab Sample ID: LCS 880-40137/2-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1114		mg/Kg		111	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1081		mg/Kg		108	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

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

Lab Sample ID: LCS 880-40137/2-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: LCSD 880-40137/3-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1121		mg/Kg		112	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1074		mg/Kg		107	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: 890-3514-A-1-C MS
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40137

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	66.7		998	1181		mg/Kg		112	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1041		mg/Kg		104	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	117		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: 890-3514-A-1-D MSD
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40137

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	66.7		997	1183		mg/Kg		112	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	1016		mg/Kg		102	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	113		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40010/1-A
Matrix: Solid
Analysis Batch: 40325

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			11/23/22 19:11	1

Lab Sample ID: LCS 880-40010/2-A
Matrix: Solid
Analysis Batch: 40325

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	243.9		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-40010/3-A
Matrix: Solid
Analysis Batch: 40325

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	246.3		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-3519-1 MS
Matrix: Solid
Analysis Batch: 40325

Client Sample ID: SS07
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	57.9		249	281.5		mg/Kg		90	90 - 110		

Lab Sample ID: 890-3519-1 MSD
Matrix: Solid
Analysis Batch: 40325

Client Sample ID: SS07
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	57.9		249	287.5		mg/Kg		92	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

GC VOA

Analysis Batch: 40362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1	SS07	Total/NA	Solid	8021B	40407
MB 880-40407/5-A	Method Blank	Total/NA	Solid	8021B	40407
LCS 880-40407/1-A	Lab Control Sample	Total/NA	Solid	8021B	40407
LCSD 880-40407/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40407
890-3503-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	40407
890-3503-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40407

Prep Batch: 40407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1	SS07	Total/NA	Solid	5035	
MB 880-40407/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40407/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40407/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3503-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-3503-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 40032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1	SS07	Total/NA	Solid	8015B NM	40137
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015B NM	40137
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40137
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40137
890-3514-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	40137
890-3514-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	40137

Prep Batch: 40137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1	SS07	Total/NA	Solid	8015NM Prep	
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3514-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3514-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1	SS07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 40010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1	SS07	Soluble	Solid	DI Leach	
MB 880-40010/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

HPLC/IC (Continued)

Leach Batch: 40010 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1 MS	SS07	Soluble	Solid	DI Leach	
890-3519-1 MSD	SS07	Soluble	Solid	DI Leach	

Analysis Batch: 40325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-1	SS07	Soluble	Solid	300.0	40010
MB 880-40010/1-A	Method Blank	Soluble	Solid	300.0	40010
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	300.0	40010
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40010
890-3519-1 MS	SS07	Soluble	Solid	300.0	40010
890-3519-1 MSD	SS07	Soluble	Solid	300.0	40010

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

Client Sample ID: SS07
Date Collected: 11/16/22 13:10
Date Received: 11/18/22 08:20

Lab Sample ID: 890-3519-1
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			5.00 g	5 mL	40407	11/28/22 09:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40362	11/28/22 19:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40557	11/29/22 09:20	SM	EET MID
Total/NA	Analysis	8015 NM		1			40192	11/22/22 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	40137	11/21/22 17:39	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40032	11/22/22 00:35	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	40010	11/20/22 12:21	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40325	11/23/22 19:35	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: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

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: PLU 18 TWR Sat Battery

Job ID: 890-3519-1
SDG: 03E1558144

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3519-1	SS07	Solid	11/16/22 13:10	11/18/22 08:20	0.5'

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11/29/2022

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337-257-8307	Email:	tmorrissey@ensolum.com

Work Order Comments

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

Project Name:	PLU 18 TWR Sat. Battery	Turn Around	
Project Number:	03E1558144	☑ Routine ☐ Rush	
Project Location:	32.20635, -103.81299	Due Date:	
Sampler's Name:	Meredith Roberts	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	Thm007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.4	
Total Containers:		Corrected Temperature:	4.2	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chlorides	BTEX	TPH
SS07	S	11/16/22	1310	0.5'	G	1		X	X	X

890-3519 Chain of Custody

Preservative Codes

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

Sample Comments

Incident #:
nAPP2230551957

Cost Center:
2111031001

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	[signature]	[signature]	11-18-22 820			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 11/10/2023 1:29:49 PM

Released to Imaging: 2/29/2024 4:12:50 PM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3519-1
SDG Number: 03E1558144

Login Number: 3519
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3519-1
SDG Number: 03E1558144

Login Number: 3519
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 11/21/22 08:46 AM

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Generated 11/29/2022 8:54:24 AM

JOB DESCRIPTION

PLU 18 TWR Sat Battery
SDG NUMBER 03E1558144

JOB NUMBER

890-3521-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 2/29/2024 4:12:30 PM

my EOL

Eurofins Carlsbad

Job Notes

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

Authorization

Generated
11/29/2022 8:54:24 AM

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

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Laboratory Job ID: 890-3521-1
SDG: 03E1558144

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Definitions/Glossary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

Job ID: 890-3521-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3521-1

Receipt
The sample was received on 11/18/2022 8:20 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 4.2°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SS08 (890-3521-1).

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: The surrogate recovery for the blank associated with preparation batch 880-40137 and analytical batch 880-40032 was outside the upper control limits.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

Client Sample ID: SS08

Date Collected: 11/16/22 13:15
Date Received: 11/18/22 08:20
Sample Depth: 0.5'

Lab Sample ID: 890-3521-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/28/22 09:59	11/28/22 20:06	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/28/22 09:59	11/28/22 20:06	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/28/22 09:59	11/28/22 20:06	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/28/22 09:59	11/28/22 20:06	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/28/22 09:59	11/28/22 20:06	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/28/22 09:59	11/28/22 20:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*11/28/22 09:59*	*11/28/22 20:06*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*11/28/22 09:59*	*11/28/22 20:06*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/29/22 09:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/22/22 10:35	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/21/22 17:39	11/22/22 01:36	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/21/22 17:39	11/22/22 01:36	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/21/22 17:39	11/22/22 01:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*11/21/22 17:39*	*11/22/22 01:36*	*1*
o-Terphenyl	*116*		*70 - 130*	*11/21/22 17:39*	*11/22/22 01:36*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**49.4**		5.00		mg/Kg			11/23/22 20:08	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

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)										
890-3503-A-1-C MS	Matrix Spike	105	110										
890-3503-A-1-D MSD	Matrix Spike Duplicate	100	110										
890-3521-1	SS08	92	113										
LCS 880-40407/1-A	Lab Control Sample	107	105										
LCSD 880-40407/2-A	Lab Control Sample Dup	103	114										
MB 880-40407/5-A	Method Blank	80	103										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-3514-A-1-C MS	Matrix Spike	117	119										
890-3514-A-1-D MSD	Matrix Spike Duplicate	115	113										
890-3521-1	SS08	106	116										
LCS 880-40137/2-A	Lab Control Sample	89	101										
LCSD 880-40137/3-A	Lab Control Sample Dup	91	101										
MB 880-40137/1-A	Method Blank	129	154 S1+										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40407/5-A
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40407

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/28/22 09:59	11/28/22 12:11	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/28/22 09:59	11/28/22 12:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*11/28/22 09:59*	*11/28/22 12:11*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*11/28/22 09:59*	*11/28/22 12:11*	*1*

Lab Sample ID: LCS 880-40407/1-A
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40407

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	0.1006		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.1080		mg/Kg		108	70 - 130		
m-Xylene & p-Xylene			0.200	0.2161		mg/Kg		108	70 - 130		
o-Xylene			0.100	0.1070		mg/Kg		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 880-40407/2-A
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40407

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1068		mg/Kg		107	70 - 130	13	35
Toluene			0.100	0.1006		mg/Kg		101	70 - 130	0	35
Ethylbenzene			0.100	0.1024		mg/Kg		102	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.2084		mg/Kg		104	70 - 130	4	35
o-Xylene			0.100	0.1031		mg/Kg		103	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: 890-3503-A-1-C MS
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40407

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.100	0.09904		mg/Kg		99	70 - 130		
Toluene	<0.00201	U	0.100	0.08596		mg/Kg		86	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

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

Lab Sample ID: 890-3503-A-1-C MS
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40407

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.100	0.08173		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.201	0.1679		mg/Kg		84	70 - 130
o-Xylene	<0.00201	U	0.100	0.08293		mg/Kg		83	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 890-3503-A-1-D MSD
Matrix: Solid
Analysis Batch: 40362

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40407

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0990	0.1026		mg/Kg		104	70 - 130	3	35
Toluene	<0.00201	U	0.0990	0.09200		mg/Kg		93	70 - 130	7	35
Ethylbenzene	<0.00201	U	0.0990	0.08517		mg/Kg		86	70 - 130	4	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1742		mg/Kg		88	70 - 130	4	35
o-Xylene	<0.00201	U	0.0990	0.08588		mg/Kg		87	70 - 130	3	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

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

Lab Sample ID: MB 880-40137/1-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40137

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		11/21/22 17:39	11/21/22 20:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/21/22 17:39	11/21/22 20:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*
o-Terphenyl	*154*	*S1+*	*70 - 130*	*11/21/22 17:39*	*11/21/22 20:13*	*1*

Lab Sample ID: LCS 880-40137/2-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1114		mg/Kg		111	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1081		mg/Kg		108	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

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

Lab Sample ID: LCS 880-40137/2-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: LCSD 880-40137/3-A
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40137

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1121		mg/Kg		112	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1074		mg/Kg		107	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: 890-3514-A-1-C MS
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 40137

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	66.7		998	1181		mg/Kg		112	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1041		mg/Kg		104	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	117		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: 890-3514-A-1-D MSD
Matrix: Solid
Analysis Batch: 40032

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 40137

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	66.7		997	1183		mg/Kg		112	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	1016		mg/Kg		102	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	113		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40010/1-A
Matrix: Solid
Analysis Batch: 40325

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			11/23/22 19:11	1

Lab Sample ID: LCS 880-40010/2-A
Matrix: Solid
Analysis Batch: 40325

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	243.9		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-40010/3-A
Matrix: Solid
Analysis Batch: 40325

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	246.3		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-3519-A-1-B MS
Matrix: Solid
Analysis Batch: 40325

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	57.9		249	281.5		mg/Kg		90	90 - 110		

Lab Sample ID: 890-3519-A-1-C MSD
Matrix: Solid
Analysis Batch: 40325

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	57.9		249	287.5		mg/Kg		92	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

GC VOA

Analysis Batch: 40362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3521-1	SS08	Total/NA	Solid	8021B	40407
MB 880-40407/5-A	Method Blank	Total/NA	Solid	8021B	40407
LCS 880-40407/1-A	Lab Control Sample	Total/NA	Solid	8021B	40407
LCSD 880-40407/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40407
890-3503-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	40407
890-3503-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	40407

Prep Batch: 40407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3521-1	SS08	Total/NA	Solid	5035	
MB 880-40407/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40407/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40407/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3503-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-3503-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 40559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3521-1	SS08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 40032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3521-1	SS08	Total/NA	Solid	8015B NM	40137
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015B NM	40137
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40137
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40137
890-3514-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	40137
890-3514-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	40137

Prep Batch: 40137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3521-1	SS08	Total/NA	Solid	8015NM Prep	
MB 880-40137/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40137/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40137/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3514-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3514-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3521-1	SS08	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 40010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3521-1	SS08	Soluble	Solid	DI Leach	
MB 880-40010/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

HPLC/IC (Continued)

Leach Batch: 40010 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3519-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3519-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 40325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3521-1	SS08	Soluble	Solid	300.0	40010
MB 880-40010/1-A	Method Blank	Soluble	Solid	300.0	40010
LCS 880-40010/2-A	Lab Control Sample	Soluble	Solid	300.0	40010
LCSD 880-40010/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40010
890-3519-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	40010
890-3519-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	40010

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

Client Sample ID: SS08

Date Collected: 11/16/22 13:15
Date Received: 11/18/22 08:20

Lab Sample ID: 890-3521-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	40407	11/28/22 09:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40362	11/28/22 20:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			40559	11/29/22 09:20	SM	EET MID
Total/NA	Analysis	8015 NM		1			40194	11/22/22 10:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	40137	11/21/22 17:39	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40032	11/22/22 01:36	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	40010	11/20/22 12:21	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	40325	11/23/22 20:08	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: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

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: PLU 18 TWR Sat Battery

Job ID: 890-3521-1
SDG: 03E1558144

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3521-1	SS08	Solid	11/16/22 13:15	11/18/22 08:20	0.5'

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11/29/2022

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Enselum, LLC	Company Name:	XTO Energy
Address:	3122 Nat'l Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337-257-8307 Email:		tmorrissey@enselum.com

Work Order Comments

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

Project Name:	PLU 18 TWR Sat. Battery	Turn Around	
Project Number:	03E1558144	☑ Routine ☐ Rush	
Project Location:	32.20635, -103.81299	Due Date:	
Sampler's Name:	Meredith Roberts	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT	Temp Blank: (Yes) No	Wet Ice: (Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	TH0007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.4
Total Containers:		Corrected Temperature:	4.2

ANALYSIS REQUEST

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chlorides	BTEX	TPH	Sample Comments
SS08	S	11/16/22	1315	0.5'	G	1		X	X	X	Incident #: nAPP2230551957
											Cost Center: 2111031001

890-3521 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			11.18.22 820	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 11/10/2023 1:29:49 PM

Released to Imaging: 2/29/2024 4:12:50 PM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3521-1
SDG Number: 03E1558144

Login Number: 3521
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3521-1
SDG Number: 03E1558144

Login Number: 3521
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 11/21/22 08:46 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 12/28/2022 11:18:43 AM

JOB DESCRIPTION

PLU 18 TWR Sat Battery
SDG NUMBER 03E1558144

JOB NUMBER

890-3665-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

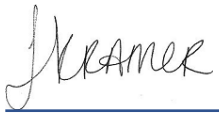
Released to Imaging: 2/29/2024 4:12:30 PM

Eurofins Carlsbad

Job Notes

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

Authorization



Generated
12/28/2022 11:18:43 AM

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

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Laboratory Job ID: 890-3665-1
SDG: 03E1558144

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Definitions/Glossary

Client: Ensolum Job ID: 890-3665-1
Project/Site: PLU 18 TWR Sat Battery SDG: 03E1558144

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, 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: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Job ID: 890-3665-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3665-1

Receipt
The samples were received on 12/15/2022 3:40 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH01 (890-3665-1), PH01A (890-3665-2), PH02 (890-3665-3), PH03 (890-3665-4), PH04 (890-3665-5), PH05 (890-3665-6), PH05A (890-3665-7), PH06 (890-3665-8), PH06A (890-3665-9), PH07 (890-3665-10), PH07A (890-3665-11), PH08 (890-3665-12) and PH08A (890-3665-13).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: PH01A (890-3665-2), PH05A (890-3665-7), PH06 (890-3665-8) and PH07 (890-3665-10). 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: PH08A (890-3665-13). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-3665-A-1-B MS). 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 880-41935 and analytical batch 880-42343 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-41936 and analytical batch 880-42534 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: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH01

Date Collected: 12/15/22 12:20
Date Received: 12/15/22 15:40
Sample Depth: 2'

Lab Sample ID: 890-3665-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		12/27/22 10:51	12/28/22 00:08	1
Toluene	<0.00201	U	0.00201		mg/Kg		12/27/22 10:51	12/28/22 00:08	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		12/27/22 10:51	12/28/22 00:08	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		12/27/22 10:51	12/28/22 00:08	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		12/27/22 10:51	12/28/22 00:08	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		12/27/22 10:51	12/28/22 00:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*12/27/22 10:51*	*12/28/22 00:08*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*12/27/22 10:51*	*12/28/22 00:08*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/19/22 17:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 11:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 11:15	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 11:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*12/19/22 08:49*	*12/19/22 11:15*	*1*
o-Terphenyl	*101*		*70 - 130*	*12/19/22 08:49*	*12/19/22 11:15*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3300**		25.0		mg/Kg			12/27/22 19:33	5

Client Sample ID: PH01A

Date Collected: 12/15/22 12:30
Date Received: 12/15/22 15:40
Sample Depth: 4'

Lab Sample ID: 890-3665-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 00:29	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 00:29	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 00:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/27/22 10:51	12/28/22 00:29	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 00:29	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/27/22 10:51	12/28/22 00:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*41*	*S1-*	*70 - 130*	*12/27/22 10:51*	*12/28/22 00:29*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH01A

Lab Sample ID: 890-3665-2
Matrix: Solid
Date Collected: 12/15/22 12:30
Date Received: 12/15/22 15:40
Sample Depth: 4'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*12/27/22 10:51*	*12/28/22 00:29*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			12/19/22 17:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		12/19/22 08:49	12/19/22 12:19	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		12/19/22 08:49	12/19/22 12:19	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/19/22 08:49	12/19/22 12:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*12/19/22 08:49*	*12/19/22 12:19*	*1*
o-Terphenyl	*85*		*70 - 130*	*12/19/22 08:49*	*12/19/22 12:19*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**37.8**		5.00	mg/Kg			12/27/22 19:38	1

Client Sample ID: PH02

Lab Sample ID: 890-3665-3
Matrix: Solid
Date Collected: 12/15/22 11:10
Date Received: 12/15/22 15:40
Sample Depth: 4'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		12/27/22 10:51	12/28/22 00:49	1
Toluene	<0.00199	U	0.00199	mg/Kg		12/27/22 10:51	12/28/22 00:49	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		12/27/22 10:51	12/28/22 00:49	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		12/27/22 10:51	12/28/22 00:49	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		12/27/22 10:51	12/28/22 00:49	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		12/27/22 10:51	12/28/22 00:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*12/27/22 10:51*	*12/28/22 00:49*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*12/27/22 10:51*	*12/28/22 00:49*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			12/19/22 17:50	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH02

Date Collected: 12/15/22 11:10
Date Received: 12/15/22 15:40
Sample Depth: 4'

Lab Sample ID: 890-3665-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 12:39	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 12:39	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 12:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*12/19/22 08:49*	*12/19/22 12:39*	*1*
o-Terphenyl	*89*		*70 - 130*	*12/19/22 08:49*	*12/19/22 12:39*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**148**		5.04		mg/Kg			12/28/22 08:42	1

Client Sample ID: PH03

Date Collected: 12/15/22 13:30
Date Received: 12/15/22 15:40
Sample Depth: 4'

Lab Sample ID: 890-3665-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 01:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 01:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 01:10	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/27/22 10:51	12/28/22 01:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 01:10	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/27/22 10:51	12/28/22 01:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*12/27/22 10:51*	*12/28/22 01:10*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*12/27/22 10:51*	*12/28/22 01:10*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/19/22 17:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 13:01	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 13:01	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 13:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*12/19/22 08:49*	*12/19/22 13:01*	*1*
o-Terphenyl	*101*		*70 - 130*	*12/19/22 08:49*	*12/19/22 13:01*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH03

Lab Sample ID: 890-3665-4
Matrix: Solid
Date Collected: 12/15/22 13:30
Date Received: 12/15/22 15:40
Sample Depth: 4'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	217		4.97		mg/Kg			12/27/22 19:45	1

Client Sample ID: PH04

Lab Sample ID: 890-3665-5
Matrix: Solid
Date Collected: 12/15/22 09:40
Date Received: 12/15/22 15:40
Sample Depth: 4'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 01:30	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 01:30	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 01:30	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/27/22 10:51	12/28/22 01:30	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 01:30	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/27/22 10:51	12/28/22 01:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*12/27/22 10:51*	*12/28/22 01:30*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*12/27/22 10:51*	*12/28/22 01:30*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/19/22 17:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 13:22	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 13:22	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*12/19/22 08:49*	*12/19/22 13:22*	*1*
o-Terphenyl	*84*		*70 - 130*	*12/19/22 08:49*	*12/19/22 13:22*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	86.6		5.02		mg/Kg			12/27/22 19:50	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH05

Date Collected: 12/15/22 10:10
Date Received: 12/15/22 15:40
Sample Depth: 3'

Lab Sample ID: 890-3665-6
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 01:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 01:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 01:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/27/22 10:51	12/28/22 01:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 01:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/27/22 10:51	12/28/22 01:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*12/27/22 10:51*	*12/28/22 01:51*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*12/27/22 10:51*	*12/28/22 01:51*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/19/22 17:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 13:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 13:43	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/19/22 08:49	12/19/22 13:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*12/19/22 08:49*	*12/19/22 13:43*	*1*
o-Terphenyl	*88*		*70 - 130*	*12/19/22 08:49*	*12/19/22 13:43*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1960**		25.0		mg/Kg			12/27/22 19:54	5

Client Sample ID: PH05A

Date Collected: 12/15/22 10:15
Date Received: 12/15/22 15:40
Sample Depth: 4'

Lab Sample ID: 890-3665-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 02:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 02:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 02:12	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		12/27/22 10:51	12/28/22 02:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 02:12	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		12/27/22 10:51	12/28/22 02:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*12/27/22 10:51*	*12/28/22 02:12*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH05A

Date Collected: 12/15/22 10:15
Date Received: 12/15/22 15:40
Sample Depth: 4'

Lab Sample ID: 890-3665-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*59*	*S1-*	*70 - 130*	*12/27/22 10:51*	*12/28/22 02:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			12/19/22 17:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		12/19/22 08:49	12/19/22 14:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		12/19/22 08:49	12/19/22 14:04	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/19/22 08:49	12/19/22 14:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*12/19/22 08:49*	*12/19/22 14:04*	*1*
o-Terphenyl	*109*		*70 - 130*	*12/19/22 08:49*	*12/19/22 14:04*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1210**		4.96	mg/Kg			12/27/22 19:59	1

Client Sample ID: PH06

Date Collected: 12/15/22 10:25
Date Received: 12/15/22 15:40
Sample Depth: 1'

Lab Sample ID: 890-3665-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		12/27/22 10:51	12/28/22 02:32	1
Toluene	<0.00199	U	0.00199	mg/Kg		12/27/22 10:51	12/28/22 02:32	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		12/27/22 10:51	12/28/22 02:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		12/27/22 10:51	12/28/22 02:32	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		12/27/22 10:51	12/28/22 02:32	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		12/27/22 10:51	12/28/22 02:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*61*	*S1-*	*70 - 130*	*12/27/22 10:51*	*12/28/22 02:32*	*1*
1,4-Difluorobenzene (Surr)	*57*	*S1-*	*70 - 130*	*12/27/22 10:51*	*12/28/22 02:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			12/19/22 17:50	1

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH06

Lab Sample ID: 890-3665-8
Matrix: Solid
Date Collected: 12/15/22 10:25
Date Received: 12/15/22 15:40
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 14:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 14:25	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 14:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*12/19/22 08:49*	*12/19/22 14:25*	*1*
o-Terphenyl	*101*		*70 - 130*	*12/19/22 08:49*	*12/19/22 14:25*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1360**		24.9		mg/Kg			12/23/22 20:30	5

Client Sample ID: PH06A

Lab Sample ID: 890-3665-9
Matrix: Solid
Date Collected: 12/15/22 10:40
Date Received: 12/15/22 15:40
Sample Depth: 4'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 02:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 02:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 02:53	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/27/22 10:51	12/28/22 02:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/28/22 02:53	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/27/22 10:51	12/28/22 02:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*12/27/22 10:51*	*12/28/22 02:53*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*12/27/22 10:51*	*12/28/22 02:53*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/19/22 17:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 14:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 14:46	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/19/22 08:49	12/19/22 14:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*12/19/22 08:49*	*12/19/22 14:46*	*1*
o-Terphenyl	*90*		*70 - 130*	*12/19/22 08:49*	*12/19/22 14:46*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH06A

Lab Sample ID: 890-3665-9
Matrix: Solid
Date Collected: 12/15/22 10:40
Date Received: 12/15/22 15:40
Sample Depth: 4'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1280		25.0		mg/Kg			12/23/22 20:39	5

Client Sample ID: PH07

Lab Sample ID: 890-3665-10
Matrix: Solid
Date Collected: 12/15/22 12:35
Date Received: 12/15/22 15:40
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		12/27/22 10:51	12/28/22 03:14	1
Toluene	<0.00201	U	0.00201		mg/Kg		12/27/22 10:51	12/28/22 03:14	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		12/27/22 10:51	12/28/22 03:14	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		12/27/22 10:51	12/28/22 03:14	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		12/27/22 10:51	12/28/22 03:14	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		12/27/22 10:51	12/28/22 03:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*12/27/22 10:51*	*12/28/22 03:14*	*1*
1,4-Difluorobenzene (Surr)	*63*	*S1-*	*70 - 130*	*12/27/22 10:51*	*12/28/22 03:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/20/22 09:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/19/22 08:52	12/19/22 13:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/19/22 08:52	12/19/22 13:43	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/19/22 08:52	12/19/22 13:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*12/19/22 08:52*	*12/19/22 13:43*	*1*
o-Terphenyl	*93*		*70 - 130*	*12/19/22 08:52*	*12/19/22 13:43*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3440		25.2		mg/Kg			12/23/22 20:48	5

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH07A

Lab Sample ID: 890-3665-11
Matrix: Solid
Date Collected: 12/15/22 12:50
Date Received: 12/15/22 15:40
Sample Depth: 4'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 04:37	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 04:37	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 04:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/27/22 10:51	12/28/22 04:37	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 04:37	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/27/22 10:51	12/28/22 04:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*12/27/22 10:51*	*12/28/22 04:37*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*12/27/22 10:51*	*12/28/22 04:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/20/22 09:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/19/22 08:52	12/19/22 14:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/19/22 08:52	12/19/22 14:04	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/19/22 08:52	12/19/22 14:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*12/19/22 08:52*	*12/19/22 14:04*	*1*
o-Terphenyl	*92*		*70 - 130*	*12/19/22 08:52*	*12/19/22 14:04*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**405**		4.97		mg/Kg			12/24/22 11:47	1

Client Sample ID: PH08

Lab Sample ID: 890-3665-12
Matrix: Solid
Date Collected: 12/15/22 12:55
Date Received: 12/15/22 15:40
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 08:15	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 08:15	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 08:15	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/27/22 10:51	12/28/22 08:15	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/27/22 10:51	12/28/22 08:15	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/27/22 10:51	12/28/22 08:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*12/27/22 10:51*	*12/28/22 08:15*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH08

Lab Sample ID: 890-3665-12
Matrix: Solid
Date Collected: 12/15/22 12:55
Date Received: 12/15/22 15:40
Sample Depth: 1'

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*12/27/22 10:51*	*12/28/22 08:15*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			12/20/22 09:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/19/22 08:52	12/19/22 14:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/19/22 08:52	12/19/22 14:25	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/19/22 08:52	12/19/22 14:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*71*		*70 - 130*	*12/19/22 08:52*	*12/19/22 14:25*	*1*
o-Terphenyl	*72*		*70 - 130*	*12/19/22 08:52*	*12/19/22 14:25*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1070**		4.99	mg/Kg			12/24/22 11:55	1

Client Sample ID: PH08A

Lab Sample ID: 890-3665-13
Matrix: Solid
Date Collected: 12/15/22 13:10
Date Received: 12/15/22 15:40
Sample Depth: 4'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/27/22 10:51	12/28/22 08:36	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/27/22 10:51	12/28/22 08:36	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/27/22 10:51	12/28/22 08:36	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		12/27/22 10:51	12/28/22 08:36	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/27/22 10:51	12/28/22 08:36	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		12/27/22 10:51	12/28/22 08:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*56*	*S1-*	*70 - 130*	*12/27/22 10:51*	*12/28/22 08:36*	*1*
1,4-Difluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*12/27/22 10:51*	*12/28/22 08:36*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			12/28/22 10:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			12/20/22 09:50	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH08A

Date Collected: 12/15/22 13:10
Date Received: 12/15/22 15:40
Sample Depth: 4'

Lab Sample ID: 890-3665-13

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/19/22 08:52	12/19/22 14:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/19/22 08:52	12/19/22 14:46	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/19/22 08:52	12/19/22 14:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*12/19/22 08:52*	*12/19/22 14:46*	*1*
o-Terphenyl	*90*		*70 - 130*	*12/19/22 08:52*	*12/19/22 14:46*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**275**		5.03		mg/Kg			12/24/22 12:04	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-3665-1	PH01	109	87
890-3665-1 MS	PH01	102	95
890-3665-1 MSD	PH01	107	99
890-3665-2	PH01A	41 S1-	80
890-3665-3	PH02	126	97
890-3665-4	PH03	114	78
890-3665-5	PH04	124	102
890-3665-6	PH05	130	94
890-3665-7	PH05A	69 S1-	59 S1-
890-3665-8	PH06	61 S1-	57 S1-
890-3665-9	PH06A	112	103
890-3665-10	PH07	101	63 S1-
890-3665-11	PH07A	112	93
890-3665-12	PH08	109	70
890-3665-13	PH08A	56 S1-	69 S1-
LCS 880-42682/1-A	Lab Control Sample	103	99
LCSD 880-42682/2-A	Lab Control Sample Dup	100	96
MB 880-42531/5-A	Method Blank	95	93
MB 880-42682/5-A	Method Blank	100	93

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-3665-1	PH01	97	101
890-3665-1 MS	PH01	79	69 S1-
890-3665-1 MSD	PH01	80	70
890-3665-2	PH01A	85	85
890-3665-3	PH02	86	89
890-3665-4	PH03	100	101
890-3665-5	PH04	85	84
890-3665-6	PH05	87	88
890-3665-7	PH05A	106	109
890-3665-8	PH06	99	101
890-3665-9	PH06A	88	90
890-3665-10	PH07	89	93
890-3665-11	PH07A	88	92
890-3665-12	PH08	71	72
890-3665-13	PH08A	88	90
890-3669-A-1-B MS	Matrix Spike	79	72
890-3669-A-1-C MSD	Matrix Spike Duplicate	80	72
LCS 880-42126/2-A	Lab Control Sample	123	121
LCS 880-42127/2-A	Lab Control Sample	92	100
LCSD 880-42126/3-A	Lab Control Sample Dup	111	108

Surrogate Summary

Client: Ensolum Job ID: 890-3665-1
Project/Site: PLU 18 TWR Sat Battery SDG: 03E1558144

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)								
LCSD 880-42127/3-A	Lab Control Sample Dup	83	91								
MB 880-42126/1-A	Method Blank	101	108								
MB 880-42127/1-A	Method Blank	102	109								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42531/5-A
Matrix: Solid
Analysis Batch: 42623

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42531

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/22/22 14:30	12/27/22 13:02	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/22/22 14:30	12/27/22 13:02	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/22/22 14:30	12/27/22 13:02	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/22/22 14:30	12/27/22 13:02	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/22/22 14:30	12/27/22 13:02	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/22/22 14:30	12/27/22 13:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*12/22/22 14:30*	*12/27/22 13:02*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*12/22/22 14:30*	*12/27/22 13:02*	*1*

Lab Sample ID: MB 880-42682/5-A
Matrix: Solid
Analysis Batch: 42623

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42682

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/27/22 23:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/27/22 23:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/27/22 23:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/27/22 10:51	12/27/22 23:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/27/22 10:51	12/27/22 23:46	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/27/22 10:51	12/27/22 23:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*12/27/22 10:51*	*12/27/22 23:46*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*12/27/22 10:51*	*12/27/22 23:46*	*1*

Lab Sample ID: LCS 880-42682/1-A
Matrix: Solid
Analysis Batch: 42623

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42682

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09207		mg/Kg		92	70 - 130		
Toluene			0.100	0.09011		mg/Kg		90	70 - 130		
Ethylbenzene			0.100	0.08511		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			0.200	0.1881		mg/Kg		94	70 - 130		
o-Xylene			0.100	0.09609		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 880-42682/2-A
Matrix: Solid
Analysis Batch: 42623

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42682

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08700		mg/Kg		87	70 - 130	6	35

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QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

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

Lab Sample ID: LCSD 880-42682/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42623 — **Prep Batch: 42682**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.08558		mg/Kg		86	70 - 130	5	35
Ethylbenzene			0.100	0.08052		mg/Kg		81	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1781		mg/Kg		89	70 - 130	5	35
o-Xylene			0.100	0.09154		mg/Kg		92	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 890-3665-1 MS — **Client Sample ID: PH01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42623 — **Prep Batch: 42682**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.0998	0.08738		mg/Kg		88	70 - 130
Toluene	<0.00201	U	0.0998	0.08709		mg/Kg		86	70 - 130
Ethylbenzene	<0.00201	U	0.0998	0.08016		mg/Kg		80	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1747		mg/Kg		88	70 - 130
o-Xylene	<0.00201	U	0.0998	0.08894		mg/Kg		89	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 890-3665-1 MSD — **Client Sample ID: PH01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42623 — **Prep Batch: 42682**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0990	0.09707		mg/Kg		98	70 - 130	11	35
Toluene	<0.00201	U	0.0990	0.09361		mg/Kg		94	70 - 130	7	35
Ethylbenzene	<0.00201	U	0.0990	0.08619		mg/Kg		87	70 - 130	7	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1872		mg/Kg		95	70 - 130	7	35
o-Xylene	<0.00201	U	0.0990	0.09547		mg/Kg		96	70 - 130	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

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

Lab Sample ID: MB 880-42126/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42117 — **Prep Batch: 42126**

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		12/19/22 08:09	12/19/22 08:42	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

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

Lab Sample ID: MB 880-42126/1-A
Matrix: Solid
Analysis Batch: 42117

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42126

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		12/19/22 08:09	12/19/22 08:42	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/19/22 08:09	12/19/22 08:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*12/19/22 08:09*	*12/19/22 08:42*	*1*
o-Terphenyl	*108*		*70 - 130*	*12/19/22 08:09*	*12/19/22 08:42*	*1*

Lab Sample ID: LCS 880-42126/2-A
Matrix: Solid
Analysis Batch: 42117

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42126

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1044		mg/Kg		104	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1028		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*123*		*70 - 130*
o-Terphenyl	*121*		*70 - 130*

Lab Sample ID: LCSD 880-42126/3-A
Matrix: Solid
Analysis Batch: 42117

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42126

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	879.7		mg/Kg		88	70 - 130	17	20
Diesel Range Organics (Over C10-C28)			1000	894.3		mg/Kg		89	70 - 130	14	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*111*		*70 - 130*
o-Terphenyl	*108*		*70 - 130*

Lab Sample ID: 890-3665-1 MS
Matrix: Solid
Analysis Batch: 42117

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 42126

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	886.2		mg/Kg		86	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	999	744.9		mg/Kg		75	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*79*		*70 - 130*
o-Terphenyl	*69*	*S1-*	*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

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

Lab Sample ID: 890-3665-1 MSD — **Client Sample ID: PH01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42117 — **Prep Batch: 42126**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	858.6		mg/Kg		84	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	757.5		mg/Kg		76	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*80*		*70 - 130*
o-Terphenyl	*70*		*70 - 130*

Lab Sample ID: MB 880-42127/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42119 — **Prep Batch: 42127**

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		12/19/22 08:40	12/19/22 08:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/19/22 08:40	12/19/22 08:42	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/19/22 08:40	12/19/22 08:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*12/19/22 08:40*	*12/19/22 08:42*	*1*
o-Terphenyl	*109*		*70 - 130*	*12/19/22 08:40*	*12/19/22 08:42*	*1*

Lab Sample ID: LCS 880-42127/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42119 — **Prep Batch: 42127**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	828.3		mg/Kg		83	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	784.8		mg/Kg		78	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*100*		*70 - 130*

Lab Sample ID: LCSD 880-42127/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42119 — **Prep Batch: 42127**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	755.1		mg/Kg		76	70 - 130	9	20
Diesel Range Organics (Over C10-C28)			1000	749.2		mg/Kg		75	70 - 130	5	20

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

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

Lab Sample ID: LCSD 880-42127/3-A
Matrix: Solid
Analysis Batch: 42119

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42127

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	83		70 - 130
o-Terphenyl	91		70 - 130

Lab Sample ID: 890-3669-A-1-B MS
Matrix: Solid
Analysis Batch: 42119

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42127

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	960.5		mg/Kg		94	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	999	792.9		mg/Kg		76	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	79		70 - 130
o-Terphenyl	72		70 - 130

Lab Sample ID: 890-3669-A-1-C MSD
Matrix: Solid
Analysis Batch: 42119

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 42127

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	966.6		mg/Kg		95	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	786.3		mg/Kg		76	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	80		70 - 130
o-Terphenyl	72		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-41932/1-A
Matrix: Solid
Analysis Batch: 42332

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			12/23/22 16:26	1

Lab Sample ID: LCS 880-41932/2-A
Matrix: Solid
Analysis Batch: 42332

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	264.6		mg/Kg		106	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-41932/3-A
Matrix: Solid
Analysis Batch: 42332

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	264.9		mg/Kg		106	90 - 110	0	20

Lab Sample ID: 890-3660-A-3-B MS
Matrix: Solid
Analysis Batch: 42332

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	297		248	566.1		mg/Kg		109	90 - 110		

Lab Sample ID: 890-3660-A-3-C MSD
Matrix: Solid
Analysis Batch: 42332

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	297		248	548.6		mg/Kg		102	90 - 110	3	20

Lab Sample ID: MB 880-41935/1-A
Matrix: Solid
Analysis Batch: 42343

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			12/24/22 07:42	1

Lab Sample ID: LCS 880-41935/2-A
Matrix: Solid
Analysis Batch: 42343

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	262.2		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-41935/3-A
Matrix: Solid
Analysis Batch: 42343

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	273.7		mg/Kg		109	90 - 110	4	20

Lab Sample ID: 880-22792-A-8-B MS
Matrix: Solid
Analysis Batch: 42343

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	63.6	F1	248	361.4	F1	mg/Kg		120	90 - 110		

Lab Sample ID: 880-22792-A-8-C MSD
Matrix: Solid
Analysis Batch: 42343

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	63.6	F1	248	376.1	F1	mg/Kg		126	90 - 110	4	20

QC Sample Results

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-41936/1-A
Matrix: Solid
Analysis Batch: 42534

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			12/27/22 17:35	1

Lab Sample ID: LCS 880-41936/2-A
Matrix: Solid
Analysis Batch: 42534

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	265.3		mg/Kg		106	90 - 110		

Lab Sample ID: LCSD 880-41936/3-A
Matrix: Solid
Analysis Batch: 42534

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	265.3		mg/Kg		106	90 - 110	0	20

Lab Sample ID: 880-22791-A-6-B MS
Matrix: Solid
Analysis Batch: 42534

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	18600	F1	5040	24900	F1	mg/Kg		125	90 - 110		

Lab Sample ID: 880-22791-A-6-C MSD
Matrix: Solid
Analysis Batch: 42534

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	18600	F1	5040	25550	F1	mg/Kg		138	90 - 110	3	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

GC VOA

Prep Batch: 42531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-42531/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 42623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-1	PH01	Total/NA	Solid	8021B	42682
890-3665-2	PH01A	Total/NA	Solid	8021B	42682
890-3665-3	PH02	Total/NA	Solid	8021B	42682
890-3665-4	PH03	Total/NA	Solid	8021B	42682
890-3665-5	PH04	Total/NA	Solid	8021B	42682
890-3665-6	PH05	Total/NA	Solid	8021B	42682
890-3665-7	PH05A	Total/NA	Solid	8021B	42682
890-3665-8	PH06	Total/NA	Solid	8021B	42682
890-3665-9	PH06A	Total/NA	Solid	8021B	42682
890-3665-10	PH07	Total/NA	Solid	8021B	42682
890-3665-11	PH07A	Total/NA	Solid	8021B	42682
890-3665-12	PH08	Total/NA	Solid	8021B	42682
890-3665-13	PH08A	Total/NA	Solid	8021B	42682
MB 880-42531/5-A	Method Blank	Total/NA	Solid	8021B	42531
MB 880-42682/5-A	Method Blank	Total/NA	Solid	8021B	42682
LCS 880-42682/1-A	Lab Control Sample	Total/NA	Solid	8021B	42682
LCSD 880-42682/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	42682
890-3665-1 MS	PH01	Total/NA	Solid	8021B	42682
890-3665-1 MSD	PH01	Total/NA	Solid	8021B	42682

Prep Batch: 42682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-1	PH01	Total/NA	Solid	5035	
890-3665-2	PH01A	Total/NA	Solid	5035	
890-3665-3	PH02	Total/NA	Solid	5035	
890-3665-4	PH03	Total/NA	Solid	5035	
890-3665-5	PH04	Total/NA	Solid	5035	
890-3665-6	PH05	Total/NA	Solid	5035	
890-3665-7	PH05A	Total/NA	Solid	5035	
890-3665-8	PH06	Total/NA	Solid	5035	
890-3665-9	PH06A	Total/NA	Solid	5035	
890-3665-10	PH07	Total/NA	Solid	5035	
890-3665-11	PH07A	Total/NA	Solid	5035	
890-3665-12	PH08	Total/NA	Solid	5035	
890-3665-13	PH08A	Total/NA	Solid	5035	
MB 880-42682/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-42682/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-42682/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3665-1 MS	PH01	Total/NA	Solid	5035	
890-3665-1 MSD	PH01	Total/NA	Solid	5035	

Analysis Batch: 42785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-1	PH01	Total/NA	Solid	Total BTEX	
890-3665-2	PH01A	Total/NA	Solid	Total BTEX	
890-3665-3	PH02	Total/NA	Solid	Total BTEX	
890-3665-4	PH03	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

GC VOA (Continued)

Analysis Batch: 42785 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-5	PH04	Total/NA	Solid	Total BTEX	
890-3665-6	PH05	Total/NA	Solid	Total BTEX	
890-3665-7	PH05A	Total/NA	Solid	Total BTEX	
890-3665-8	PH06	Total/NA	Solid	Total BTEX	
890-3665-9	PH06A	Total/NA	Solid	Total BTEX	
890-3665-10	PH07	Total/NA	Solid	Total BTEX	
890-3665-11	PH07A	Total/NA	Solid	Total BTEX	
890-3665-12	PH08	Total/NA	Solid	Total BTEX	
890-3665-13	PH08A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 42117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-1	PH01	Total/NA	Solid	8015B NM	42126
890-3665-2	PH01A	Total/NA	Solid	8015B NM	42126
890-3665-3	PH02	Total/NA	Solid	8015B NM	42126
890-3665-4	PH03	Total/NA	Solid	8015B NM	42126
890-3665-5	PH04	Total/NA	Solid	8015B NM	42126
890-3665-6	PH05	Total/NA	Solid	8015B NM	42126
890-3665-7	PH05A	Total/NA	Solid	8015B NM	42126
890-3665-8	PH06	Total/NA	Solid	8015B NM	42126
890-3665-9	PH06A	Total/NA	Solid	8015B NM	42126
MB 880-42126/1-A	Method Blank	Total/NA	Solid	8015B NM	42126
LCS 880-42126/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42126
LCSD 880-42126/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42126
890-3665-1 MS	PH01	Total/NA	Solid	8015B NM	42126
890-3665-1 MSD	PH01	Total/NA	Solid	8015B NM	42126

Analysis Batch: 42119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-10	PH07	Total/NA	Solid	8015B NM	42127
890-3665-11	PH07A	Total/NA	Solid	8015B NM	42127
890-3665-12	PH08	Total/NA	Solid	8015B NM	42127
890-3665-13	PH08A	Total/NA	Solid	8015B NM	42127
MB 880-42127/1-A	Method Blank	Total/NA	Solid	8015B NM	42127
LCS 880-42127/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42127
LCSD 880-42127/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42127
890-3669-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	42127
890-3669-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	42127

Prep Batch: 42126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-1	PH01	Total/NA	Solid	8015NM Prep	
890-3665-2	PH01A	Total/NA	Solid	8015NM Prep	
890-3665-3	PH02	Total/NA	Solid	8015NM Prep	
890-3665-4	PH03	Total/NA	Solid	8015NM Prep	
890-3665-5	PH04	Total/NA	Solid	8015NM Prep	
890-3665-6	PH05	Total/NA	Solid	8015NM Prep	
890-3665-7	PH05A	Total/NA	Solid	8015NM Prep	
890-3665-8	PH06	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

GC Semi VOA (Continued)

Prep Batch: 42126 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-9	PH06A	Total/NA	Solid	8015NM Prep	
MB 880-42126/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42126/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42126/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3665-1 MS	PH01	Total/NA	Solid	8015NM Prep	
890-3665-1 MSD	PH01	Total/NA	Solid	8015NM Prep	

Prep Batch: 42127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-10	PH07	Total/NA	Solid	8015NM Prep	
890-3665-11	PH07A	Total/NA	Solid	8015NM Prep	
890-3665-12	PH08	Total/NA	Solid	8015NM Prep	
890-3665-13	PH08A	Total/NA	Solid	8015NM Prep	
MB 880-42127/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42127/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42127/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3669-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3669-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 42277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-1	PH01	Total/NA	Solid	8015 NM	
890-3665-2	PH01A	Total/NA	Solid	8015 NM	
890-3665-3	PH02	Total/NA	Solid	8015 NM	
890-3665-4	PH03	Total/NA	Solid	8015 NM	
890-3665-5	PH04	Total/NA	Solid	8015 NM	
890-3665-6	PH05	Total/NA	Solid	8015 NM	
890-3665-7	PH05A	Total/NA	Solid	8015 NM	
890-3665-8	PH06	Total/NA	Solid	8015 NM	
890-3665-9	PH06A	Total/NA	Solid	8015 NM	
890-3665-10	PH07	Total/NA	Solid	8015 NM	
890-3665-11	PH07A	Total/NA	Solid	8015 NM	
890-3665-12	PH08	Total/NA	Solid	8015 NM	
890-3665-13	PH08A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 41932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-8	PH06	Soluble	Solid	DI Leach	
890-3665-9	PH06A	Soluble	Solid	DI Leach	
890-3665-10	PH07	Soluble	Solid	DI Leach	
MB 880-41932/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-41932/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-41932/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3660-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3660-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 41935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-11	PH07A	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

HPLC/IC (Continued)

Leach Batch: 41935 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-12	PH08	Soluble	Solid	DI Leach	
890-3665-13	PH08A	Soluble	Solid	DI Leach	
MB 880-41935/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-41935/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-41935/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-22792-A-8-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-22792-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 41936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-1	PH01	Soluble	Solid	DI Leach	
890-3665-2	PH01A	Soluble	Solid	DI Leach	
890-3665-3	PH02	Soluble	Solid	DI Leach	
890-3665-4	PH03	Soluble	Solid	DI Leach	
890-3665-5	PH04	Soluble	Solid	DI Leach	
890-3665-6	PH05	Soluble	Solid	DI Leach	
890-3665-7	PH05A	Soluble	Solid	DI Leach	
MB 880-41936/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-41936/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-41936/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-22791-A-6-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-22791-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 42332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-8	PH06	Soluble	Solid	300.0	41932
890-3665-9	PH06A	Soluble	Solid	300.0	41932
890-3665-10	PH07	Soluble	Solid	300.0	41932
MB 880-41932/1-A	Method Blank	Soluble	Solid	300.0	41932
LCS 880-41932/2-A	Lab Control Sample	Soluble	Solid	300.0	41932
LCSD 880-41932/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	41932
890-3660-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	41932
890-3660-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	41932

Analysis Batch: 42343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-11	PH07A	Soluble	Solid	300.0	41935
890-3665-12	PH08	Soluble	Solid	300.0	41935
890-3665-13	PH08A	Soluble	Solid	300.0	41935
MB 880-41935/1-A	Method Blank	Soluble	Solid	300.0	41935
LCS 880-41935/2-A	Lab Control Sample	Soluble	Solid	300.0	41935
LCSD 880-41935/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	41935
880-22792-A-8-B MS	Matrix Spike	Soluble	Solid	300.0	41935
880-22792-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	41935

Analysis Batch: 42534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-1	PH01	Soluble	Solid	300.0	41936
890-3665-2	PH01A	Soluble	Solid	300.0	41936
890-3665-3	PH02	Soluble	Solid	300.0	41936
890-3665-4	PH03	Soluble	Solid	300.0	41936

QC Association Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

HPLC/IC (Continued)

Analysis Batch: 42534 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3665-5	PH04	Soluble	Solid	300.0	41936
890-3665-6	PH05	Soluble	Solid	300.0	41936
890-3665-7	PH05A	Soluble	Solid	300.0	41936
MB 880-41936/1-A	Method Blank	Soluble	Solid	300.0	41936
LCS 880-41936/2-A	Lab Control Sample	Soluble	Solid	300.0	41936
LCSD 880-41936/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	41936
880-22791-A-6-B MS	Matrix Spike	Soluble	Solid	300.0	41936
880-22791-A-6-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	41936

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH01

Date Collected: 12/15/22 12:20
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 00:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 11:15	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	41936	12/22/22 11:47	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	42534	12/27/22 19:33	CH	EET MID

Client Sample ID: PH01A

Date Collected: 12/15/22 12:30
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 00:29	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 12:19	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	41936	12/22/22 11:47	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42534	12/27/22 19:38	CH	EET MID

Client Sample ID: PH02

Date Collected: 12/15/22 11:10
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-3
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	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 00:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 12:39	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	41936	12/22/22 11:47	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42534	12/28/22 08:42	CH	EET MID

Client Sample ID: PH03

Date Collected: 12/15/22 13:30
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-4
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			5.01 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 01:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH03
Date Collected: 12/15/22 13:30
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-4
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			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 13:01	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	41936	12/22/22 11:47	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42534	12/27/22 19:45	CH	EET MID

Client Sample ID: PH04
Date Collected: 12/15/22 09:40
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 01:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 13:22	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	41936	12/22/22 11:47	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42534	12/27/22 19:50	CH	EET MID

Client Sample ID: PH05
Date Collected: 12/15/22 10:10
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 01:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 13:43	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	41936	12/22/22 11:47	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	42534	12/27/22 19:54	CH	EET MID

Client Sample ID: PH05A
Date Collected: 12/15/22 10:15
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-7
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			4.99 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 02:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 14:04	SM	EET MID

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Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH05A
Date Collected: 12/15/22 10:15
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	41936	12/22/22 11:47	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42534	12/27/22 19:59	CH	EET MID

Client Sample ID: PH06
Date Collected: 12/15/22 10:25
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 02:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 14:25	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	41932	12/19/22 14:26	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	42332	12/23/22 20:30	CH	EET MID

Client Sample ID: PH06A
Date Collected: 12/15/22 10:40
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 02:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/19/22 17:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	42126	12/19/22 08:49	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42117	12/19/22 14:46	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	41932	12/19/22 14:26	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	42332	12/23/22 20:39	CH	EET MID

Client Sample ID: PH07
Date Collected: 12/15/22 12:35
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 03:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/20/22 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42127	12/19/22 08:52	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42119	12/19/22 13:43	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	41932	12/19/22 14:26	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	42332	12/23/22 20:48	CH	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Client Sample ID: PH07A

Date Collected: 12/15/22 12:50
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 04:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/20/22 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	42127	12/19/22 08:52	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42119	12/19/22 14:04	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	41935	12/19/22 14:45	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42343	12/24/22 11:47	CH	EET MID

Client Sample ID: PH08

Date Collected: 12/15/22 12:55
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-12
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	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 08:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/20/22 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	42127	12/19/22 08:52	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42119	12/19/22 14:25	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	41935	12/19/22 14:45	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42343	12/24/22 11:55	CH	EET MID

Client Sample ID: PH08A

Date Collected: 12/15/22 13:10
Date Received: 12/15/22 15:40

Lab Sample ID: 890-3665-13
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	42682	12/27/22 10:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42623	12/28/22 08:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			42785	12/28/22 10:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			42277	12/20/22 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	42127	12/19/22 08:52	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42119	12/19/22 14:46	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	41935	12/19/22 14:45	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42343	12/24/22 12:04	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: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

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: PLU 18 TWR Sat Battery

Job ID: 890-3665-1
SDG: 03E1558144

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3665-1	PH01	Solid	12/15/22 12:20	12/15/22 15:40	2'
890-3665-2	PH01A	Solid	12/15/22 12:30	12/15/22 15:40	4'
890-3665-3	PH02	Solid	12/15/22 11:10	12/15/22 15:40	4'
890-3665-4	PH03	Solid	12/15/22 13:30	12/15/22 15:40	4'
890-3665-5	PH04	Solid	12/15/22 09:40	12/15/22 15:40	4'
890-3665-6	PH05	Solid	12/15/22 10:10	12/15/22 15:40	3'
890-3665-7	PH05A	Solid	12/15/22 10:15	12/15/22 15:40	4'
890-3665-8	PH06	Solid	12/15/22 10:25	12/15/22 15:40	1'
890-3665-9	PH06A	Solid	12/15/22 10:40	12/15/22 15:40	4'
890-3665-10	PH07	Solid	12/15/22 12:35	12/15/22 15:40	1'
890-3665-11	PH07A	Solid	12/15/22 12:50	12/15/22 15:40	4'
890-3665-12	PH08	Solid	12/15/22 12:55	12/15/22 15:40	1'
890-3665-13	PH08A	Solid	12/15/22 13:10	12/15/22 15:40	4'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 2

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

Work Order Comments

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

Project Name:	PLU 18 TWR Sat Battery	Turn Around	
Project Number:	03E1558144	☑ Routine ☐ Rush	
Project Location:	32.20635, -103.81299	Due Date:	
Sampler's Name:	Meredith Roberts	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TMM-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.4
Total Containers:		Corrected Temperature:	1.2

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chlorides	BTEX	TPH
PH01	S	12/15/22	1220	2'	G	1		X	X	X
PH01A			1230	4'						
PH02			1110	4'						
PH03			1330	4'						
PH04			0940	4'						
PH05			1010	3'						
PH05A			1015	4'						
PH06			1025	1'						
~~PH06A~~			~~1040~~	4'						
PH07			1235	1'						

890-3665 Chain of Custody

Preservative Codes

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

Sample Comments

Incident #: nAPP2230551957

Cost Center: 2111031001

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

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

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 11/10/2023 1:29:49 PM
Released to Imaging: 2/29/2024 4:12:50 PM
12/28/2022

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	13122 Nat'l Parks Hwy Ensolum, LLC	Company Name:	XTO Energy
Address:		Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	337-257-8307	Email:	tmorrissey@ensolum.com

Work Order Comments

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

Project Name:	PLU 18 TWR Sat Battery	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558144	Due Date:	
Project Location:	32.20635, -103.81299	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Meredith Roberts		
PO #:			

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

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chlorides	BTEX	TPH	Sample Comments
PH01A	S	12/15/22	1250	4'	G	1		X	X	X	Incident #: nAPP2230551957
PH08	↓	↓	1255	1'	↓	↓		↓	↓	↓	
PH08A	↓	↓	1310	4'	↓	↓		↓	↓	↓	Cost Center: 2111031001

MR

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	[signature]	Amanda Stutz	12/15/22 1540			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 11/10/2023 1:29:49 PM
Released to Imaging: 2/29/2024 4:12:50 PM
12/28/2022
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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3665-1
SDG Number: 03E1558144

Login Number: 3665
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3665-1
SDG Number: 03E1558144

Login Number: 3665
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 12/19/22 09:10 AM

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

ENSOLUM

APPENDIX E

NMOCD Notifications

Tacoma Morrissey

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Thursday, December 8, 2022 10:38 AM
To: ocd.enviro@emnrd.nm.gov; Bratcher, Michael, EMNRD; Harimon, Jocelyn, EMNRD; Hamlet, Robert, EMNRD
Cc: DelawareSpills /SM; Tacoma Morrissey
Subject: XTO - Sampling Notification (Week of 12/12/22 - 12/16/22)

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of Dec 12, 2022.

- PLU 27 BD 161H / nAPP2217546910, nAPP2218236445, nAPP2218943007
- PLU 18 TWR Sat Battery/ nAPP2230551957
- Pickett Draw Federal #001/ NAB1919955454

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

November 10, 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
PLU 18 Twin Wells Ranch East Satellite
Incident Number NAPP2230551957
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 excavation and soil sampling activities at the PLU 18 Twin Wells Ranch East Satellite (Site). The purpose of the site assessment and soil sampling activities, was to address impacts to soil in accordance with a *Remediation Work Plan* (*Work Plan*). Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this *Closure Request*, describing site assessment and excavation activities that have occurred and requesting Closure for Incident Number NAPP2230551957

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in in Unit G, Section 19, Township 24 South, Range 31 East, in Eddy County, New Mexico (32.20635°, -103.81299°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On October 20, 2022, internal corrosion caused a fitting on the pipe rack to separate resulting in the release of approximately 14.22 barrels (bbls) of produced water onto the pad; 2 bbls of fluid were recovered. XTO submitted a Release Notification Form C-141 (Form C-141) to the New Mexico Oil Conservation Division (NMOCD) on November 1, 2022. The release was assigned Incident Number NAPP2230551957.

On January 13, 2022, the *Work Plan* was submitted to the NMOCD to confirm depth to water through installation of a soil boring, excavate impacted soil, and request a variance for frequency of confirmation sampling. On May 16, 2023, NMOCD denied the *Work Plan* and stated the following conditions:

- When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. If evidence of depth to ground water within a ½ mile radius of the site cannot be provided, impacted soils will need to meet Table 1 Closure Criteria for ground water at a depth of 50 feet or less.
- The variance is approved for confirmation floor samples to be collected every 500 ft2. Confirmation sidewall samples should be collected every 200 ft2.

- The work will need to occur in 90 days after the work plan has been reviewed.

The following *Closure Request* summarizes implementation of the *Work Plan*.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized according to Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the NMAC. Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Based on the results of the Site Characterization, detailed in the Work Plan, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

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

On August 7, 2023, Ensolum personnel oversaw installation of a soil boring within 0.5 miles of the Site utilizing a truck-mounted air rotary rig. The soil boring (C-04759) was permitted by the New Mexico Office of the State Engineer (NMOSE) and was advanced to a depth of 110 feet bgs. An Ensolum geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activities. The borehole lithologic/soil sampling log is included in Appendix A. The location of the borehole is approximately 0.28 miles northwest of the Site (Figure 1) and confirmed that groundwater beneath the Site is greater than 100 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. Based on the confirmed depth to water greater than 100 feet bgs, the Table 1 Closure Criteria assigned in the *Work Plan* are applicable and appropriate for protection of groundwater at this Site.

DELINEATION SOIL SAMPLING ACTIVITIES

Between September and October 2023, Ensolum personnel were at the Site to oversee delineation and excavation activities. New and existing delineation sample locations are depicted on Figure 2. Existing delineation locations PH05 and PH06 were advanced to five feet bgs for additional vertical delineation. New delineation locations were advanced within the release extent at SS09/BH09 and SS10/BH10. Additional delineation soil samples, PH05B, PH06B, SS09/BH09, SS10/BH10. Finally, boreholes BH01 through BH04 were advanced to a maximum depth of 5 feet bgs within the release extent.. Soil from the delineation samples was field screened for volatile organic carbons (VOCs) and chloride using a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for the borehole and potholes were logged on lithologic/soil sampling logs, which are included in Appendix B. Photo documentation was conducted and a photographic log is included in Appendix C.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins 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-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for delineation soil samples all newly collected samples indicated that all COC concentrations are compliant with the Closure Criteria. This confirmed the absense of impacts in portions of the release and verified vertical and lateral delineation of the release to the strictest Table I Closure Criteria.

EXCAVATION

Previously collected samples at delineation locations SS01/PH01, SS02/PH02, SS03/PH03, and SS04/PH04 indicated the presence of soil that exceeded Closure Criteria at the gorund surface along the northern and southern edges of the release extent. That soil was excavated using a backhoe and transport vehicle. To direct excavation activities, Ensolum personnel screened soil for VOCs and chloride.

Following removal of impacted soil, Ensolum personnel collected 5-point composite soil samples representing at least 200 square feet from the sidewalls and 500 square feet from the floor of the excavation, following the conditions of the *Work Plan* response. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS21 were collected from the floor of the excavation from depths ranging from of 0.5 feet bgs to 1 foot bgs. Composite soil samples SW01 and SW05 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 1 foot bgs. The excavation soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

The total excavation extents measured approximately 9,000 square feet. A total of approximately 335 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Carlsbad, New Mexico. After completion of confirmation sampling, the excavation areas were secured with fencing.

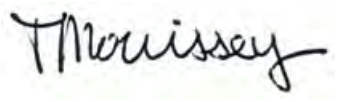
Laboratory analytical results for the excavation floor soil samples FS01 through FS21 and sidewall soil samples SW01 through SW05, collected at depths ranging from ground surface to 1 foot bgs, indicated all COC concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

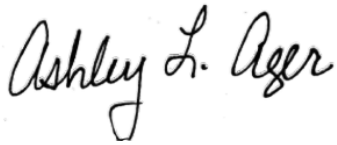
CLOSURE REQUEST

XTO backfilled the excavation with material purchased locally and recontoured the Site to match pre-existing Site conditions. Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater has been estimated to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAPP2230551957.

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

Sincerely,
Ensolum, LLC





Tacoma Morrissey, MS
Senior Geologist

Ashley L. Ager, MS, PG
Principal

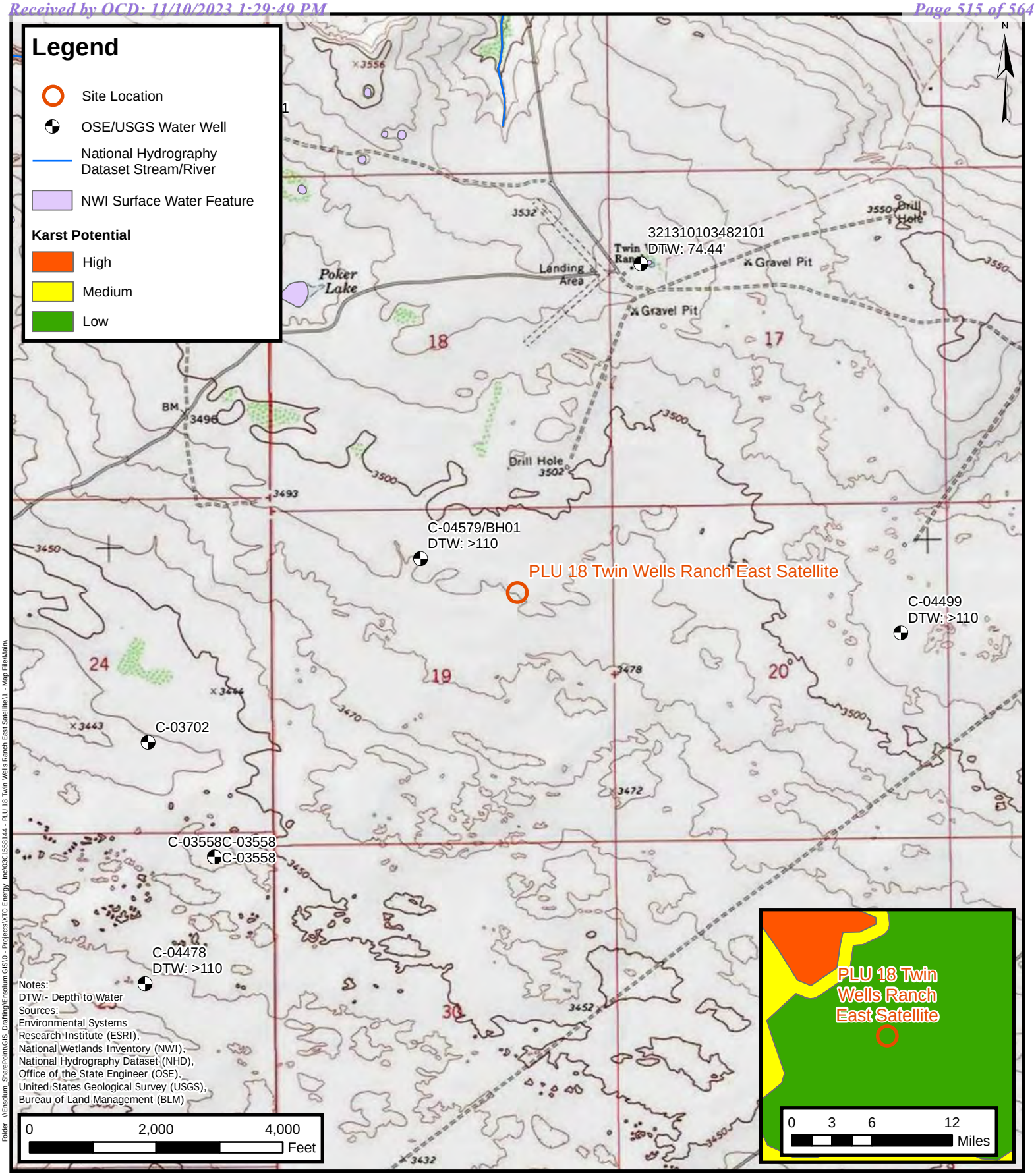
cc: Garrett Green, XTO
Tommee Lambert, XTO
BLM

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Lithologic / Soil Sampling Logs
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Notifications
Appendix F	*Remediation Work Plan,* January 13, 2023

ENSOLUM

FIGURES



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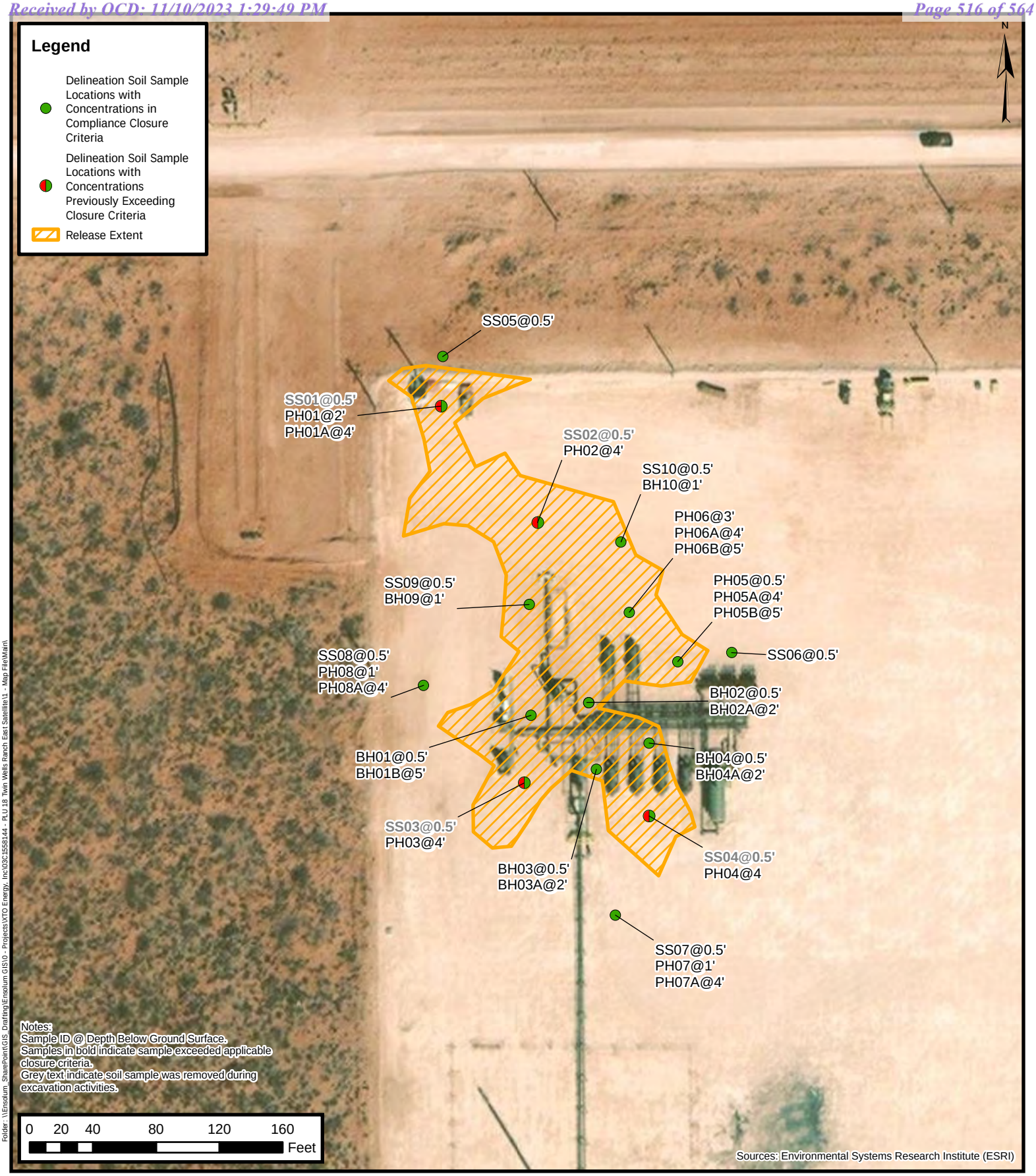
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc.
PLU 18 Twin Wells Ranch East Satellite
Incident Number: NAPP2230551957
Unit G Sec 19 T24S R31E
Eddy County, New Mexico

FIGURE 1



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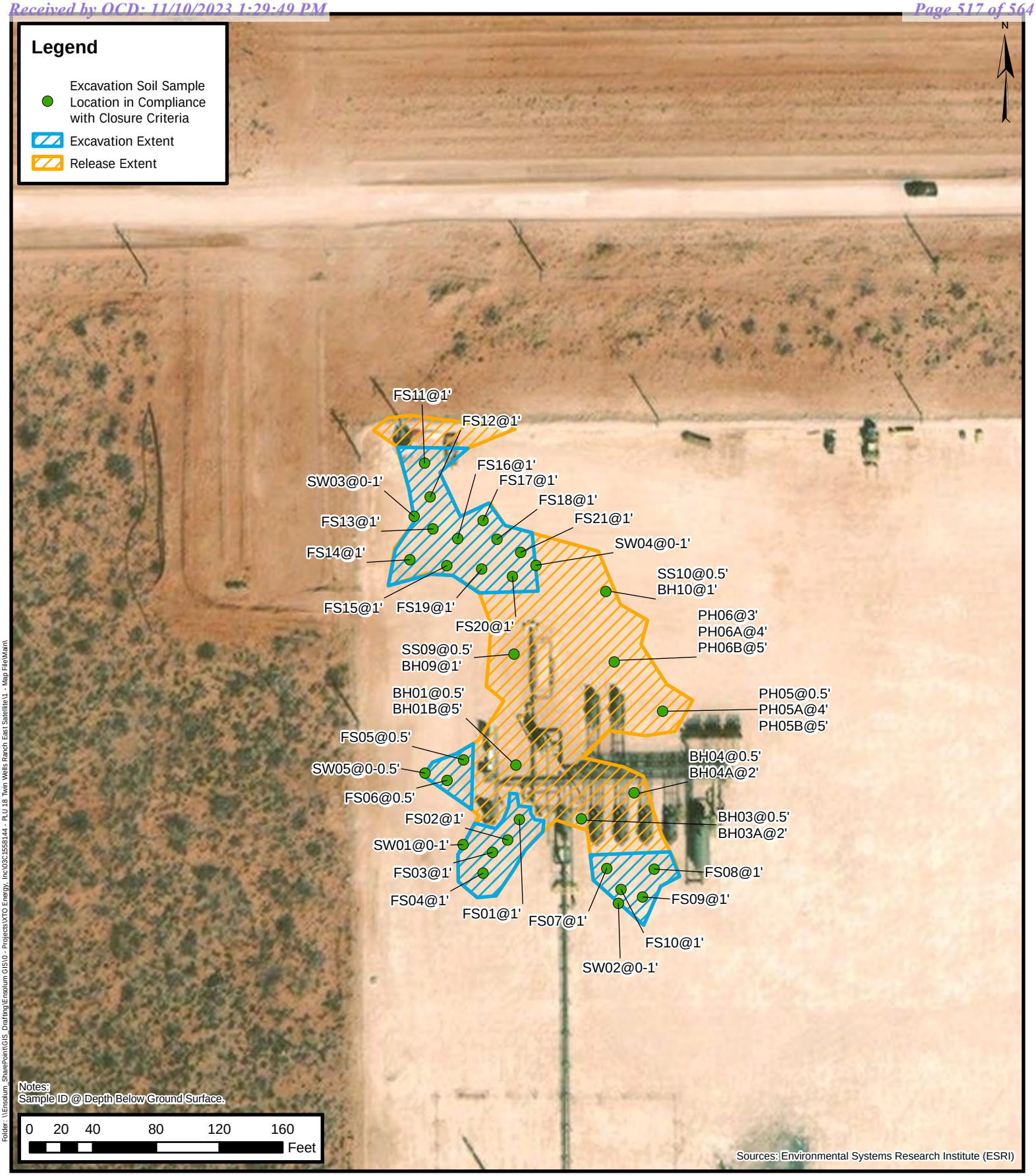
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

XTO Energy, Inc.
PLU 18 Twin Wells Ranch East Satellite
Incident Number: NAPP2230551957
Unit G Sec 19 T24S R31E
Eddy County, New Mexico

FIGURE 2



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ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO Energy, Inc.
PLU 18 Twin Wells Ranch East Satellite
Incident Number: NAPP2230551957
Unit G Sec 19 T24S R31E
Eddy County, New Mexico

FIGURE 3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 18 TWIN WELLS RANCH EAST SATELLITE
XTO ENERGY, INC
EDDY COUNTY, NM

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 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples										
~~SS01~~	~~11/16/2022~~	~~0.5~~	~~<0.00201~~	~~<0.00402~~	~~66.7~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~66.7~~	~~**46,500**~~
PH01	12/15/2022	2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	3,300
PH01A	12/15/2022	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	37.8
~~SS02~~	~~11/16/2022~~	~~0.5~~	~~<0.00200~~	~~<0.00401~~	~~78.8~~	~~<50.0~~	~~60.3~~	~~<50.0~~	~~139~~	~~**26,600**~~
PH02	12/15/2022	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	148
~~SS03~~	~~11/16/2022~~	~~0.5~~	~~<0.00200~~	~~<0.00399~~	~~65.4~~	~~<49.8~~	~~<49.8~~	~~<49.8~~	~~65.4~~	~~**26,900**~~
PH03	12/15/2022	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	217
~~SS04~~	~~11/16/2022~~	~~0.5~~	~~<0.00202~~	~~<0.00404~~	~~67.2~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~67.2~~	~~**38,000**~~
PH04	12/15/2022	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	86.6
SS05	11/16/2022	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	18.1
SS06	11/16/2022	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	35.2
PH05	12/15/2022	3	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	1,960
PH05A	12/15/2022	4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	1,210
PH05B	09/06/2023	5	<0.00199	<0.00398	<49.7	<49.7	<49.7	<49.7	<49.7	99.1
PH06	12/15/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	1,360
PH06A	12/15/2022	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	1,280
PH06B	09/06/2023	5	<0.00200	<0.00401	<50.3	<50.3	<50.3	<50.3	<50.3	145
SS07	11/16/2022	0.5	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	57.9
PH07	12/15/2022	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	3,440
PH07A	12/15/2022	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	405
SS08	11/16/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	49.4
PH08	12/15/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	1,070
PH08A	12/15/2022	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	275
SS09	09/06/2023	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	102
BH09	10/16/2023	1	<0.00199	<0.00398	<50.2	145	<50.2	145	145	96.5

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XTO ENERGY, INC
EDDY COUNTY, NM

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 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
SS10	09/06/2023	0.5	<0.00198	<0.00396	<49.7	<49.7	<49.7	<49.7	<49.7	767
BH10	10/16/2023	1	<0.00199	<0.00398	<50.1	128	<50.1	128	128	707
BH01	09/06/2023	0.5	<0.00201	<0.00402	<50.2	<50.2	<50.2	<50.2	<50.2	4,190
BH01B	09/06/2023	5	<0.00202	<0.00403	<50.5	<50.5	<50.5	<50.5	<50.5	174
BH02	09/06/2023	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	379
BH02A	09/06/2023	2	<0.00199	<0.00398	<50.4	<50.4	<50.4	<50.4	<50.4	236
BH03	09/06/2023	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	1,170
BH03A	09/06/2023	2	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	155
BH04	09/06/2023	0.5	<0.00198	<0.00396	<50.1	<50.1	<50.1	<50.1	<50.1	840
BH04A	09/06/2023	2	<0.00199	<0.00398	<50.4	<50.4	<50.4	<50.4	<50.4	165
Confirmation Floor Soil Samples										
FS01	09/05/2023	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	89.0
FS02	09/05/2023	1	<0.00200	<0.00401	<49.7	<49.7	<49.7	<49.7	<49.7	183
FS03	09/05/2023	1	<0.00200	<0.00399	<49.6	<49.6	<49.6	<49.6	<49.6	105
FS04	09/05/2023	1	<0.00202	<0.00403	<50.3	<50.3	<50.3	<50.3	<50.3	361
FS05	09/05/2023	0.5	<0.00202	<0.00404	<50.1	<50.1	<50.1	<50.1	<50.1	752
FS06	09/05/2023	0.5	<0.00200	<0.00401	<50.4	<50.4	<50.4	<50.4	<50.4	1,080
FS07	09/05/2023	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	100
FS08	09/05/2023	1	<0.00202	<0.00403	<49.7	<49.7	<49.7	<49.7	<49.7	254
FS09	09/05/2023	1	<0.00200	<0.00399	<50.2	<50.2	<50.2	<50.2	<50.2	307
FS10	09/05/2023	1	<0.00198	<0.00396	<50.5	<50.5	<50.5	<50.5	<50.5	266
FS11	09/07/2023	1	<0.00200	<0.00401	<50.4	<50.4	<50.4	<50.4	<50.4	403
FS12	09/07/2023	1	<0.00200	<0.00399	<50.1	<50.1	<50.1	<50.1	<50.1	485
FS13	09/07/2023	1	<0.00199	<0.00398	<49.7	<49.7	<49.7	<49.7	<49.7	489
FS14	09/07/2023	1	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	380
FS15	09/07/2023	1	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	330

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XTO ENERGY, INC
EDDY COUNTY, NM

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 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
FS16	09/07/2023	1	<0.00202	<0.00404	<50.2	<50.2	<50.2	<50.2	<50.2	507
FS17	09/07/2023	1	<0.00199	<0.00398	<50.4	<50.4	<50.4	<50.4	<50.4	356
FS18	09/07/2023	1	<0.00199	<0.00398	<50.5	<50.5	<50.5	<50.5	<50.5	1,070
FS19	09/07/2023	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	270
FS20	09/07/2023	1	<0.00201	<0.00402	<49.6	<49.6	<49.6	<49.6	<49.6	750
FS21	09/07/2023	1	<0.00202	<0.00403	<49.7	<49.7	<49.7	<49.7	<49.7	158
Confirmation Sidewall Soil Samples										
SW01	09/05/2023	0-1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	89.9
SW02	09/05/2023	0-1	<0.00199	<0.00398	<50.3	<50.3	<50.3	<50.3	<50.3	247
SW03	09/07/2023	0-1	<0.00198	<0.00397	<49.6	<49.6	<49.6	<49.6	<49.6	463
SW04	09/07/2023	0-1	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	455
SW05	11/07/2023	0-0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	55.2

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in **bold** exceed the NMOCD Table 1 Closure Criteria or reclamation requirement where applicable.

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

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APPENDIX A

Referenced Well Records

ENSOLUM

	Sample Name: C-04579 / BH01	Date: 8/07/2023
	Site Name: PLU 18 TWR SAT BATTERY	
	Incident Number: nAPP2230551957	
	Job Number: 03C1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: M. O'Dell	Method: Air Rotary Rig
Coordinates: 32.207892, -103.817942	Hole Diameter: 5"	Total Depth: 110'

Comments: No field screening or sampling was conducted at the site.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
						10	SP	0-10'. Sand w/ trace caliche. Reddish brown, very fine to fine grained, subrounded to subangular, poorly graded, dry.
						20	CCHE	10-40'.Caliche w/ sand. Light brown to tan, very fine to fine grained, subrounded to subangular, poorly graded, dry.
						30		
						40	SP	40-100'. Sand w/ trace caliche. Reddish brown, very fine to fine grained, subrounded to subangular grains, poorly graded, dry.
						50		50': Injecting/adding water & soap at 50'
						60		
						70		
						80		
						90		
						100	SP/SC	100-110'. Clayey sand, reddish orange very fine to fine grained, poorly graded, dry.
						110		110': stopped drilling and set casing at 110'.

TD @ 110' bgs.

Mike A. Hamman, P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 749156
File Nbr: C 04759

Jul. 24, 2023

BENJAMIN BELILL
ENSOLUM, LLC
3122 NATIONAL PARKS HIGHWAY
CARLSABD, NM 88220

Greetings:

Your approved copy of the above numbered permit to drill a well for non-consumptive purposes is enclosed. You must obtain an additional permit if you intend to use the water. It is your responsibility to provide the contracted well driller with a copy of the permit that must be made available during well drilling activities.

Carefully review the attached conditions of approval for all specific permit requirements.

* If use of this well is temporary in nature and the well will be plugged at the end of the well usage, the OSE must initially approve of the plugging. If plugging approval is not conditioned in this permit, the applicant must submit a Plugging Plan of Operations for approval prior to the well being plugged. The Plugging Record must be properly completed and submitted to the OSE within 30 days of the well plugging.

* If the final intended purpose and condition requires a well ID tag and meter installation, the applicant must immediately send a completed meter report form to this office.

* The well record and log must be submitted within 30 days of the completion of the well or if the attempt was a dry hole.

* This permit expires and will be cancelled if no well is drilled and/or a well log is not received by the date set forth in the conditions of approval.

Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us.

Sincerely,

Vanessa Clements
(575)622-6521

Enclosure

explore

Mike A. Hamman, P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 749156
File Nbr: C 04759

Jul. 24, 2023

GARRETT GREEN
XTO ENERGY, INC
3401 E GREENE ST
CARLSBAD, NM 88220

Greetings:

Your approved copy of the above numbered permit to drill a well for non-consumptive purposes is enclosed. You must obtain an additional permit if you intend to use the water. It is your responsibility to provide the contracted well driller with a copy of the permit that must be made available during well drilling activities.

Carefully review the attached conditions of approval for all specific permit requirements.

* If use of this well is temporary in nature and the well will be plugged at the end of the well usage, the OSE must initially approve of the plugging. If plugging approval is not conditioned in this permit, the applicant must submit a Plugging Plan of Operations for approval prior to the well being plugged. The Plugging Record must be properly completed and submitted to the OSE within 30 days of the well plugging.

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Sincerely,

Vanessa Clements
(575)622-6521

Enclosure

explore

File No. C-4759

NEW MEXICO OFFICE OF THE STATE ENGINEER

WR-07 APPLICATION FOR PERMIT TO DRILL A WELL WITH NO WATER RIGHT

(check applicable box):

For fees, see State Engineer website: http://www.ose.state.nm.us/

Purpose:	☐ Pollution Control And/Or Recovery	☐ Ground Source Heat Pump
☐ Exploratory Well (Pump test)	☐ Construction Site/Public Works Dewatering	☐ Other(Describe):
☒ Monitoring Well	☐ Mine Dewatering	

A separate permit will be required to apply water to beneficial use regardless if use is consumptive or nonconsumptive.

☒ Temporary Request - Requested Start Date: 7/18/2023 Requested End Date: TBD

Plugging Plan of Operations Submitted? ☒ Yes ☐ No

1. APPLICANT(S)

Name: XTO Energy, Inc	Name: Ensolum, LLC
Contact or Agent: Garrett Green — check here if Agent ☐	Contact or Agent: Benjamin Belill — check here if Agent ☒
Mailing Address: 3401 E. Greene Street	Mailing Address: 3122 National Parks Highway
City: Carlsbad	City: Carlsbad
State: New Mexico Zip Code: 88220	State: New Mexico Zip Code: 88220
Phone: 575-200-0729 ☐ Home ☒ Cell Phone (Work):	Phone: 989-854-0852 ☐ Home ☒ Cell Phone (Work):
E-mail (optional): Garrett.Green@ExxonMobil.com	E-mail (optional): bbelill@ensolum.com

OSE DII JUL 7 2023 AM 10:47

FOR OSE INTERNAL USE Application for Permit, Form WR-07, Rev 11/17/16

File No.: C-4759	Trn. No.: 749154	Receipt No.: 245957
Trans Description (optional): MOW		
Sub-Basin: CUB	PCW/LOG Due Date: 7-24-24	

2. WELL(S) Describe the well(s) applicable to this application.

Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84).
District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.

☐ NM State Plane (NAD83) (Feet)
☐ NM West Zone
☐ NM East Zone
☐ NM Central Zone

☐ UTM (NAD83) (Meters)
☐ Zone 12N
☐ Zone 13N

■ Lat/Long (WGS84) (to the nearest 1/10th of second)

Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (*Quarters or Halves , Section, Township, Range*) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
C-4759 Pod1 BH01	-103.817417	32.207850	Unit C, S19, T24S, R31E, Eddy County

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)
Additional well descriptions are attached: ☐ Yes ■ No **If yes, how many**_____

Other description relating well to common landmarks, streets, or other:
Located on active well pad facility at the the Poker Lake Unit 18 TWR #103H (32.207850, -103.817417).

Well is on land owned by: Federal - Bureau of Land Management

Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. Attached? ☐ Yes ■ No
If yes, how many_____

Approximate depth of well (feet): 110	Outside diameter of well casing (inches): 2
Driller Name: Scarborough Drilling	Driller License Number: WD-1188

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

One soil boring to be advanced at the site to assess subsurface soil and regional groundwater depth. Temporary 2-inch inside diameter PVC well screen will be placed in open borehole to determine depth to water at the site. The borehole will be abandoned after 72 hours from the time the borehole is completed. The borehole location is depicted on the attached figure.

OSE DII JUL 7 2023 AM 10:47

FOR OSE INTERNAL USE — Application for Permit, Form WR-07

File No.: C-4759	Trn No.: 749156

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

Exploratory: ☐ Include a description of any proposed pump test, if applicable.	**Pollution Control and/or Recovery:** ☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for the pollution control or recovery operation. ☐ The estimated maximum period of time for completion of the operation. ☐ The annual diversion amount. ☐ The annual consumptive use amount. ☐ The maximum amount of water to be diverted and injected for the duration of the operation. ☐ The method and place of discharge.	**Construction De-Watering:** ☐ Include a description of the proposed dewatering operation, ☐ The estimated duration of the operation, ☐ The maximum amount of water to be diverted, ☐ A description of the need for the dewatering operation, and, ☐ A description of how the diverted water will be disposed of.	**Mine De-Watering:** ☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for mine dewatering. ☐ The estimated maximum period of time for completion of the operation. ☐ The source(s) of the water to be diverted. ☐ The geohydrologic characteristics of the aquifer(s). ☐ The maximum amount of water to be diverted per annum. ☐ The maximum amount of water to be diverted for the duration of the operation. ☐ The quality of the water. ☐ The method of measurement of water diverted. ☐ The recharge of water to the aquifer. ☐ Description of the estimated area of hydrologic effect of the project. ☐ The method and place of discharge. ☐ An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. ☐ A description of the methods employed to estimate effects on surface water rights and underground water rights. ☐ Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
Monitoring: ■ Include the reason for the monitoring well, and, ■ The duration of the planned monitoring.	☐ The method of measurement of water produced and discharged. ☐ The source of water to be injected. ☐ The method of measurement of water injected. ☐ The characteristics of the aquifer. ☐ The method of determining the resulting annual consumptive use of water and depletion from any related stream system. ☐ Proof of any permit required from the New Mexico Environment Department. ☐ An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	**Ground Source Heat Pump:** ☐ Include a description of the geothermal heat exchange project, ☐ The number of boreholes for the completed project and required depths. ☐ The time frame for constructing the geothermal heat exchange project, and, ☐ The duration of the project. ☐ Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	

ACKNOWLEDGEMENT

I, We (name of applicant(s)), Benjamin Belill
Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

OSE DIT JUL 7 2023 AM10:47

Benjamin Belill Digitally signed by Benjamin Belill Date: 2023.07.06 10:27:03 -04'00'
Applicant Signature

Applicant Signature

ACTION OF THE STATE ENGINEER

This application is:

☑ approved ☐ partially approved ☐ denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 24th day of July 20 23, for the State Engineer,

Mike A. Hamman, P.E., State Engineer

By: K. Parekh Kashyap Parekh
Signature Print

Title: Water Resources Manager I
Print

FOR OSE INTERNAL USE Application for Permit, Form WR-07

File No.: C-4759 Trn No.: 749156

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL

17-16 Construction of a water well by anyone without a valid New Mexico Well Driller License is illegal, and the landowner shall bear the cost of plugging the well by a licensed New Mexico well driller. This does not apply to driven wells, the casing of which does not exceed two and three-eighths inches outside diameter.

17-1A Depth of the well shall not exceed the thickness of the valley fill.

17-4 No water shall be appropriated and beneficially used under this permit.

17-6 The well authorized by this permit shall be plugged completely using the following method per Rules and Regulations Governing Well Driller Licensing, Construction, Repair and Plugging of Wells; Subsection C of 19.27.4.30 NMAC unless an alternative plugging method is proposed by the well owner and approved by the State Engineer upon completion of the permitted use. All pumping appurtenance shall be removed from the well prior to plugging. To plug a well, the entire well shall be filled from the bottom upwards to ground surface using a tremie pipe. The bottom of the tremie shall remain submerged in the sealant throughout the entire sealing process; other placement methods may be acceptable and approved by the state engineer. The well shall be plugged with an office of the state engineer approved sealant for use in the plugging of non-artesian wells. The well driller shall cut the casing off at least four (4) feet below ground surface and fill the open hole with at least two vertical feet of approved sealant. The driller must fill or cover any open annulus with sealant. Once the sealant has cured, the well driller or well owner may cover the seal with soil. A Plugging Report for said well shall be filed with the Office of the State Engineer in a District Office within 30 days of completion of the plugging.

Trn Desc: C 04759 POD1

File Number: C 04759
Trn Number: 749156

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

17-7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.

17-B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with 72-12-12 NMSA 1978. A licensed driller shall not be required for the construction of a well driven without the use of a drill rig, provided that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter.

17-C The well driller must file the well record with the State Engineer and the applicant within 30 days after the well is drilled or driven. It is the well owner's responsibility to ensure that the well driller files the well record.
The well driller may obtain the well record form from any District Office or the Office of the State Engineer website.

17-P The well shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between hydrogeologic zones.

17-Q The State Engineer retains jurisdiction over this permit.

17-R Pursuant to section 72-8-1 NMSA 1978, the permittee shall allow the State Engineer and OSE representatives entry upon private property for the performance of their respective duties, including access to the ditch or acequia to measure flow and also to the well for meter reading and water level measurement.

Trn Desc: C 04759 POD1

File Number: C 04759
Trn Number: 749156

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

LOG The Point of Diversion C 04759 POD1 must be completed and the Well Log filed on or before 07/23/2024.

IT IS THE PERMITTEE'S RESPONSIBILITY TO OBTAIN ALL AUTHORIZATIONS TO DRILL ON PROPERTY OF OTHER OWNERSHIP BEFORE COMMENCING ACTIVITIES UNDER THIS PERMIT.

ACTION OF STATE ENGINEER

Notice of Intention Rcvd: Date Rcvd. Corrected:
Formal Application Rcvd: 07/07/2023 Pub. of Notice Ordered:
Date Returned - Correction: Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this 24 day of Jul A.D., 2023

Mike A. Hamman, P.E., State Engineer

By: K. Parekh
KASHYAP PAREKH

Trn Desc: C 04759 POD1

File Number: C 04759
Trn Number: 749156

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
ROSWELL

Mike A. Hamman, P.E.
State Engineer

DISTRICT II
1900 West Second St.
Roswell, New Mexico 88201
Phone: (575) 622-6521
Fax: (575) 623-8559

July 10, 2023

XTO Energy Inc.
3401 E. Greene Street
Carlsbad, NM 88220

RE: Well Plugging Plan of Operations for well no. C-4759-POD1

Greetings:

Enclosed is your copy of the Well Plugging Plan of Operations for the above referenced well subject to the attached Conditions of Approval. The proposed method of operation is found to be acceptable and in accordance with the Rules and Regulations Governing Well Driller Licensing; Construction, Repair and Plugging of Wells 19.27.4 NMAC adopted June 30, 2017 by the State Engineer. subject to the attached Conditions of Approval.

Well Plugging Plan of Operations form (WD-08) has been updated. Current form can be found on the OSE website at the following link https://www.ose.state.nm.us/Statewide/wdForms.php.

Within 30 days after the well is plugged, the well driller is required to file a complete plugging record with the OSE and the permit holder.

Sincerely,

K. Parekh

Kashyap Parekh
Water Resources Manager I

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
ROSWELL
1900 West Second St.
Roswell, New Mexico 88201
Phone: (575) 622-6521
Fax: (575) 623- 8559

Applicant has identified wells, listed below, to be plugged. Scarborough Drilling Inc. (WD-1188) will perform the plugging.

Permittee: XTO Energy Inc.
NMOSE Permit Number: C-4759-POD1

NMOSE File	Casing diameter (inches)	Well depth (feet bgl)	Approximate static water level (feet bgl)	Latitude	Longitude
C-4759-POD1	8.0 (Soil Boring)	110	Unknown	32° 12' 28.26"	103° 49' 2.70''

Specific Plugging Conditions of Approval for Well located in Eddy County, New Mexico.

1. Water well drilling and well drilling activities, including well plugging, are regulated under 19.27.4 NMAC, which requires any person engaged in the business of well drilling within New Mexico to obtain a Well Driller License issued by the New Mexico Office of the State Engineer (NMOSE). Therefore, the firm of a New Mexico licensed Well Driller shall perform the well plugging.

2. Ground Water encountered: The total Theoretical volume of sealant required for abandonment of soil boring well is approximately 287.0 gallons. Total minimum volume of necessary sealant shall be calculated upon sounding the actual pluggable depth of well, which is estimated at 110 feet.

3. Dry Hole: The total Theoretical volume of sealant required for abandonment of soil boring well is approximately 26.0 gallons. Total minimum volume of necessary sealant shall be calculated upon sounding the actual pluggable depth of well, which is estimated at 10 feet.

4. Ground Water encountered: Type I/II Portland cement mixed with 5.2 to 6.0 gallons of fresh water per 94-lb sack of cement is approved for the plugging the well.

5. Dry Hole: (a) Drill cuttings up to ten feet of land surface. (b) 10 feet to 0 feet – Hydrated bentonite. The bentonite shall be hydrated separately with its required increments of water prior to being mixed into the cement slurry.

6. Sealant shall be placed by pumping through a tremie pipe extended to near well bottom and kept below top of the slurry column as the well is plugged from bottom-upwards in a manner that displaces

the standing water column upwards from below. Tremie pipe may be pulled as necessary to retain minimal submergence in the advancing column of sealant.

7. Should cement "shrinks-back" occur in the well, use of a tremie for topping off is required for cement placement deeper than 20 feet below land surface or if water is present in the casing. The approved sealant for topping off is identified in condition 3. and 4. of these Specific Conditions of Approval.

8. Any open annulus encountered surrounding the casing shall also be sealed by the placement of the approved sealant. When plugging shallow wells with no construction or environmental concerns, and if the well record on a well to be plugged shows a proper 20-foot annular seal, a plugging plan can propose the use of clean fill material to a nominal 30 feet bgs, then placing an OSE approved sealant to surface. Lacking that information, we would require an excavation of at least 2-feet which shall then be filled in its entirety with sealant to surface.

9. Should the NMED, or another regulatory agency sharing jurisdiction of the project authorize, or by regulation require a more stringent well plugging procedure than herein acknowledged, the more-stringent procedure should be followed. This, in part, includes provisions regarding pre-authorization to proceed, contaminant remediation, inspection, pulling/perforating of casing, or prohibition of free discharge of any fluid from the borehole during or related to the plugging process.

10. NMOSE witnessing of the plugging of the soil boring will not be required.

11. Any deviation from this plan must obtain an approved variance from this office prior to implementation.

12. A Well Plugging Record itemizing actual abandonment process and materials used shall be filed with the State Engineer within 30 days after completion of well plugging. For the plugging record, please resurvey coordinate location for well and note coordinate system for GPS unit. Please attach a copy of these plugging conditions.

The NMOSE Well Plugging Plan of Operations is hereby approved with the aforesaid conditions applied.

Witness my hand and seal this 10th day of July 2023

Mike A. Hamman, P.E. State Engineer

By: K. Parekh

Kashyap Parekh
Water Resources Manager I

WELL PLUGGING PLAN OF OPERATIONS

NOTE: A Well Plugging Plan of Operations shall be filed with and accepted by the Office of the State Engineer prior to plugging. This form may be used to plug a single well, or if you are plugging multiple monitoring wells on the same site using the same plugging methodology.

Alert! Your well may be eligible to participate in the Aquifer Mapping Program (AMP)-NM Bureau of Geology geoinfo.nmt.edu/resources/water/cgmn/ if within an area of interest and meets the minimum construction requirements, such as there is still water in your well, and the well construction reflected in a well record and log is not compromised, contact AMP at 575-835-5038 or -6951, or by email nmbg-waterlevels@nmt.edu, prior to completing this prior form. Showing proof to the OSE that your well was accepted in this program, may delay the plugging of your well until a later date.

I. FILING FEE: There is no filing fee for this form.

II. GENERAL / WELL OWNERSHIP: ☐ Check here if proposing one plan for multiple monitoring wells on the same site and attaching WD-08m

Existing Office of the State Engineer POD Number (Well Number) for well to be plugged: TBD C-4759-P001

Name of well owner: XTO Energy Inc

Mailing address: 3401 E. Greene Street County: Eddy

City: Carlsbad State: New Mexico Zip code: 88220

Phone number: 575-200-0729 E-mail: Garrett.Green@ExxonMobil.com

III. WELL DRILLER INFORMATION:

Well Driller contracted to provide plugging services: Scarborough Drilling Inc

New Mexico Well Driller License No.: WD-1188 Expiration Date: 3/31/2024

IV. WELL INFORMATION: ☐ **Check here if this plan describes method for plugging multiple monitoring wells on the same site and attach supplemental form WD-08m and skip to #2 in this section.**

Note: A copy of the existing Well Record for the well(s) to be plugged should be attached to this plan.

1) GPS Well Location: Latitude: 32 deg, 12 min, 28.26 sec
Longitude: 103 deg, 49 min, 2.70 sec, NAD 83

2) Reason(s) for plugging well(s): OSE DII JUL 7 2023 AM 10:50

Monitoring well to be plugged when no longer needed. Dry borehole will be plugged within 3 days of completion if encountered

3) Was well used for any type of monitoring program? No If yes, please use section VII of this form to detail what hydrogeologic parameters were monitored. If the well was used to monitor contaminated or poor quality water, authorization from the New Mexico Environment Department may be required prior to plugging.

4) Does the well tap brackish, saline, or otherwise poor quality water? NA If yes, provide additional detail, including analytical results and/or laboratory report(s):

5) Static water level: NA feet below land surface / feet above land surface (circle one)

6) Depth of the well: 110 feet

7) Inside diameter of innermost casing: 2 inches.

8) Casing material: Temporary SCH 40 PVC

9) The well was constructed with:

☐ an open-hole production interval, state the open interval: NA

☐ a well screen or perforated pipe, state the screened interval(s): NA

10) What annular interval surrounding the artesian casing of this well is cement-grouted? NA

11) Was the well built with surface casing? NO If yes, is the annulus surrounding the surface casing grouted or otherwise sealed? NA If yes, please describe:

12) Has all pumping equipment and associated piping been removed from the well? NA If not, describe remaining equipment and intentions to remove prior to plugging in Section VII of this form.

V. DESCRIPTION OF PLANNED WELL PLUGGING:

☐ **If plugging method differs between multiple wells on same site, a separate form must be completed for each method.**

Note: If this plan proposes to plug an artesian well in a way other than with cement grout, placed bottom to top with a tremie pipe, a detailed diagram of the well showing proposed final plugged configuration shall be attached, as well as any additional technical information, such as geophysical logs, that are necessary to adequately describe the proposal. Attach a copy of any signed OSE variance to this plugging plan.

Also, if this planned plugging plan requires a variance to 19.27.4 NMAC, attach a detailed variance request signed by the applicant.

1) Describe the method by which cement grout shall be placed in the well, or describe requested plugging methodology proposed for the well:

Temporary 2 inch well will be removed. If no water is encountered, drill cuttings will be used to ten feet below ground surface (bgs) and plugged from 0 to 10 feet bgs with hydrated bentonite. If groundwater is encountered, borehole will be plugged, tremie pipe from the bottom upwards to a slurry of Type I/II neat cement.

2) Will well head be cut-off below land surface after plugging? YES

VI. PLUGGING AND SEALING MATERIALS:

Note: The plugging of a well that taps poor quality water may require the use of a specialty cement or specialty sealant. Attach a copy of the batch mix recipe from the cement company and/or product description for specialty cement mixes or any sealant that deviates from the list of OSE approved sealants.

1) For plugging intervals that employ cement grout, complete and attach Table A.

2) For plugging intervals that will employ approved non-cement based sealant(s), complete and attach Table B.

3) Theoretical volume of grout required to plug the well to land surface: 287 gallons(8 inch borehole)

4) Type of Cement proposed: Type I/II Neat Cement

5) Proposed cement grout mix: <6.0 gallons of water per 94 pound sack of Portland cement.

6) Will the grout be: ____ batch-mixed and delivered to the site

x mixed on site

OSE DII JUL 7 2023 AM10:50

7) Grout additives requested, and percent by dry weight relative to cement:

NA

8) Additional notes and calculations:

NA

VII. ADDITIONAL INFORMATION: List additional information below, or on separate sheet(s):

NA

VIII. SIGNATURE:

I, Benjamin Belill, say that I have carefully read the foregoing Well Plugging Plan of Operations and any attachments, which are a part hereof; that I am familiar with the rules and regulations of the State Engineer pertaining to the plugging of wells and will comply with them, and that each and all of the statements in the Well Plugging Plan of Operations and attachments are true to the best of my knowledge and belief.

Benjamin Belill Digitally signed by Benjamin Belill Date: 2023.07.06 10:26:02 -04'00'

Signature of Applicant Date

IX. ACTION OF THE STATE ENGINEER:

This Well Plugging Plan of Operations is: OSE DIT JUL 7 2023 AM 10:50

X Approved subject to the attached conditions.

_____ Not approved for the reasons provided on the attached letter.

Witness my hand and official seal this 10th day of July, 2023

Mike A. Hamman P.E., New Mexico State Engineer

By: K. Parekh

KASHYAP PAREKH

W.R.M.I

GREAT SEAL OF THE STATE OF NEW MEXICO 1912

TABLE A - For plugging intervals that employ cement grout. Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of grout placement (ft bgl)	NA	NA	0
Bottom of proposed interval of grout placement (ft bgl)	NA	NA	110
Theoretical volume of grout required per interval (gallons)	NA	NA	287
Proposed cement grout mix gallons of water per 94-lb. sack of Portland cement	NA	NA	<6.0
Mixed on-site or batch-mixed and delivered?	NA	NA	onsite
Grout additive 1 requested	NA	NA	NA
Additive 1 percent by dry weight relative to cement	NA	NA	NA
Grout additive 2 requested	NA	NA	NA
Additive 2 percent by dry weight relative to cement	NA	NA	NA

OSE OIT JUL 7 2023 AM 10:50

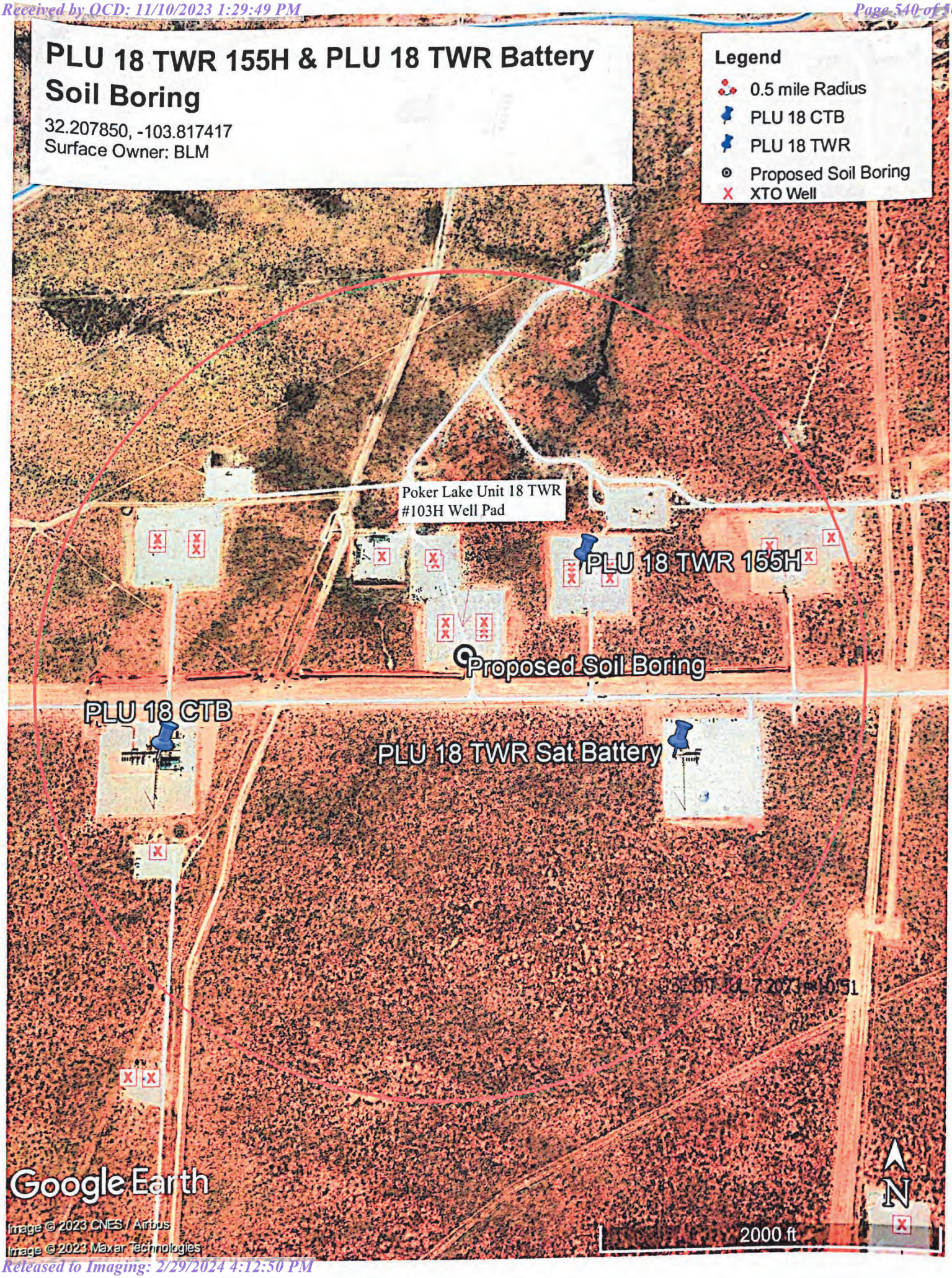
TABLE B - For plugging intervals that will employ approved non-cement based sealant(s). Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of sealant placement (ft bgl)	NA	NA	0
Bottom of proposed sealant of grout placement (ft bgl)	NA	NA	10
Theoretical volume of sealant required per interval (gallons)	NA	NA	26
Proposed abandonment sealant (manufacturer and trade name)	NA	NA	Bariod Hole Plug

OSE DIT JUL 7 2023 AM 10:51

PLU 18 TWR 155H & PLU 18 TWR Battery Soil Boring

32.207850, -103.817417
Surface Owner: BLM



From: Green, Garrett J
To: Aimee Cole; Tacoma Morrissey; Kalei Jennings; Ben Belill
Cc: Baker, Adrian
Subject: NMOSE Permit Permission
Date: Wednesday, May 18, 2022 5:56:20 PM

[**EXTERNAL EMAIL**]

NMOSE,

The following Ensolum personnel have permission to submit and sign NMOSE well permitting documents on behalf of XTO Energy, Inc.

Ashley Ager
Aimee Cole
Tacoma Morrissey
Kalei Jennings
Ben Belill

Thank you,

Sent from my iPhone

OSE DII JUL 7 2023 AM10:51

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Carlsbad Field Office
620 E. Greene St.
Carlsbad, NM 88220-6292

In Reply Refer To:
3162.4 (NM-080)
NMNM25533

July 3, 2023

NM Office of the State Engineer
1900 W. Second St.
Roswell, NM 88201

Re: Poker Lake Unit 18TWR 103H
30-015-46546
32.207850, -103.817417
Eddy County, New Mexico

OSE OII JUL 7 2023 AM10:51

To Whom It May Concern:

The above well location and the immediate area mentioned above requires advanced soil boring to take place at approximately 110 feet below ground surface. The boring will be secured and left open for 72 hours at which time XTO Energy, Inc will assess for the presence or absence of groundwater. Temporary PVC well material will be placed to total depth of the boring and secured at the surface. If water is encountered at any point during the boring, installation of the soil boring will be plugged using Portland Type 1/11 neat cement less than 6.0 gallons of water per 94lb sack. If no water is encountered, then the soil boring will be plugged. The Bureau of Land Management (landowner) authorizes the access of the area to accomplish depth to groundwater determination of this site.

If you have any questions contact Crisha Morgan, at 575-234-5987.

Sincerely,

CRISHA MORGAN Digitally signed by CRISHA MORGAN
Date: 2023.07.03 11:09:14 -06'00'

Crisha A. Morgan
Certified Environmental Protection Specialist

Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No. NMNM25533

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☐ Gas Well ☑ Other Soil Boring for determination of depth to groundwater

8. Well Name and No. Poker Lake Unit 18 TWR #103H

2. Name of Operator XTO Energy. Inc.

9. API Well No. 30-015-46546

3a. Address 3104 E. Greene Street, Carlsbad, New Mexico, 88220

3b. Phone No. *(include area code)* (575) 200-0729

10. Field and Pool or Exploratory Area NA

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*
C-19-24S-31E, Latitude 32.207850, Longitude -103.817417

11. Country or Parish, State Eddy County, New Mexico

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

XTO Energy, Inc. (XTO) requests to advance a soil boring to a depth of approximately 110 feet below ground surface for determination of regional groundwater depth. The soil boring will be located at the active XTO well pad listed above (32.207850, -103.817417). The soil boring will be left open for approximately 72 hours, to allow for the slow infill of groundwater. An oil-water interface probe will be utilized to confirm depth to groundwater in the soil boring. Following the 72 hour waiting period, the soil boring will be backfilled following approved New Mexico Office of the State Engineer plugging procedures. A site map and kmz depicting the location of the site and proposed soil boring location are included with this Form 3160.

OSE DIT JUL 7 2023 AM 10:51

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)* Garrett Green

Title SSHE Coordinator

Signature

Date 6/14/2023

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by CRISHA MORGAN Digitally signed by CRISHA MORGAN Date: 2023.07.03 10:45:53 -06'00'

Title EPS

Date 07/03/2023

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office CFO

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.
PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c)and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.
ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.
EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

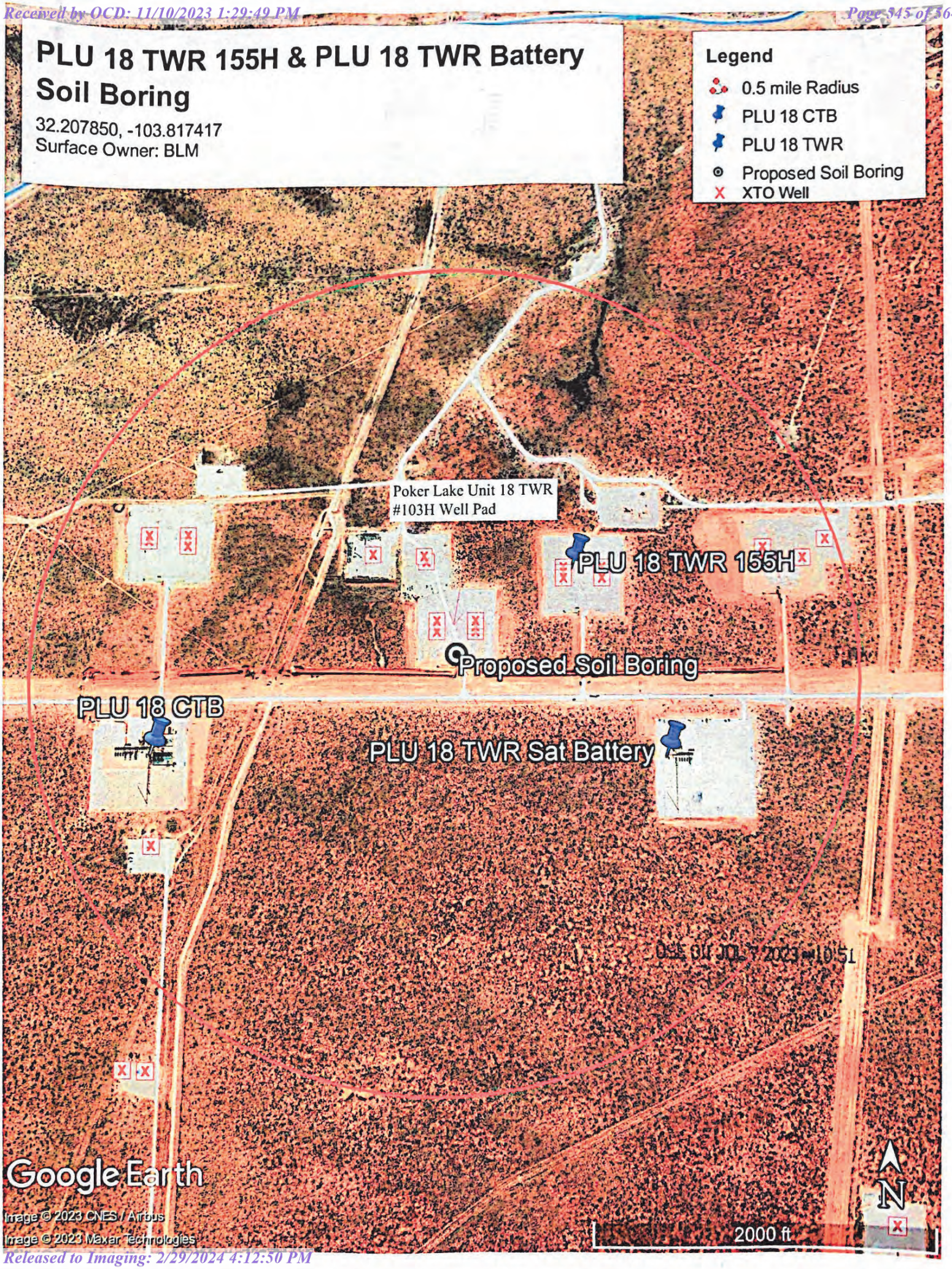
The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.
Response to this request is mandatory.
The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect ofthis form to U.S. Department ofthe Interior, Bureau ofLand Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

OSE DIT JUL 7 2023 AM10:51

PLU 18 TWR 155H & PLU 18 TWR Battery Soil Boring

32.207850, -103.817417
Surface Owner: BLM



ENSOLUM

APPENDIX B

Lithologic / Soil Sampling Logs

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name:PH01	Date: 12/15/22
	Site Name: PLU 18 Twin Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03E1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Meredith Roberts	Method: Backhoe
Coordinates: 32.20635, -103.81299	Hole Diameter: ~4"	Total Depth: 4'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Moist	34,429	0.0	Y	SS01	0'	0'	CCHE	0-1' CALICHE, moist, stained and no odor.
Moist	5,499	0.2	N		1'	1'	SP-SM	1-2', SILTY SAND to CLAYEY SAND with caliche, brown to light brown, poorly sorted, moist, no stained and slight odor.
Moist	3,181	5.0	N	PH01	2'	2'	SP-SM	SAA
Moist	2,100	0.1	N		3'	3'	SP-SM	SAA
Moist	<160	0.1	N	PH01A	4'	4'	CCHE	CALICHE, light brown, dry, no stained and no odor.
							TD	Total depth at 4' bgs.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name:PH02	Date: 12/15/22
	Site Name: PLU 18 Twin Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03E1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Meredith Roberts	Method: Backhoe
Coordinates: 32.20635, -103.81299	Hole Diameter: ~4"	Total Depth: 4'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Moist	30,122	0.0	Y	SS02	0'	0'	CCHE	0-1' CALICHE, moist, stained and no odor.
Moist	1,182	0.1	N		1'	1'	SP-SM	1-2', SILTY SAND to CLAYEY SAND with caliche, brownish red, poorly graded, moist, no stained and slight odor.
Moist	1,092	0.0	N		2'	2'	SP-SM	SAA
Dry	474	0.0	N		3'	3'	CCHE	3-4' CALICHE mixed with small amount of sand, light brown, dry, no stained and no odor.
Dry	474	0.0	N	PH02	4'	4'	CCHE	CALICHE, light brown, dry, no stained and no odor.
							TD	Total depth at 4' bgs.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name:PH03	Date: 12/15/22
	Site Name: PLU 18 Twin Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03E1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Meredith Roberts	Method: Backhoe
Coordinates: 32.20635, -103.81299	Hole Diameter: ~4"	Total Depth: 4'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Moist	>34,429	0.0	Y	SS03	0'	0'	CCHE	0-1' CALICHE, moist, stained and no odor.
Moist	1,182	0.8	N		1'	1'	SP	1-2', SILTY SAND mixed with Caliche, brownish red, poorly sorted, moist, no stained and slight odor.
Moist	474	0.2	N		2'	2'	SP	SAA
Moist	174	0.2	N		3'	3'	SP	SAA
Moist	<174	0.1	N	PH03	4'	4'	SP	SAA
						TD		Total depth at 4' bgs.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name:PH04	Date: 12/15/22
	Site Name: PLU 18 Twin Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03E1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Meredith Roberts	Method: Backhoe
Coordinates: 32.20635, -103.81299	Hole Diameter: ~4"	Total Depth: 4'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Moist	>34,429	0.0	Y	SS04	0'	0'	CCHE	0-1' CALICHE, moist, stained and no odor.
Moist	2,516	0.0	N		1'	1'	SP-SM	1-2', SILTY SAND to CLAYEY SAND with caliche, brownish red, poorly graded, moist, no stained and no odor.
Moist	472	0.1	N		2'	2'	SP-SM	SAA with slight odor.
Moist	<174	0.1	N		3'	3'	SP-SM	SAA
Moist	<174	0.1	N	PH04	4'	4'	SP-SM	SAA
						TD		Total depth at 4' bgs.

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Environmental, Engineering and Hydrogeologic Consultants

	Sample Name:PH05	Date: 12/15/22 & 9/6/2023
	Site Name: PLU 18 Twin Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03E1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: M. Roberts / M. O'Dell	Method: Backhoe
Coordinates: 32.20635, -103.81299	Hole Diameter: ~4"	Total Depth: 5'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
					0'	0'		
Moist	1,092	0.1	N		1'	1'	SP-SM	1-2', SILTY SAND to CLAYEY SAND with caliche, brownish red, poorly sorted, moist, no stained with slight odor.
Moist	319	0.0	N		2'	2'	SP-SM	SAA with no odor.
Moist	1,182	0.0	N	PH05	3'	3'	SP-SM	SAA
Moist	700	0.8	N	PH05A	4'	4'	SP-SM	SAA and started to hit hard bedrock and caliche.
Dry	<162	0.0	N	PH05B	5'	5'	SP-SM	SAA

TD Total depth at 5' bgs.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name:PH06	Date: 12/15/22 & 9/6/2023
	Site Name: PLU 18 Twin Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03E1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: M. Roberts / M. O'Dell	Method: Backhoe
Coordinates: 32.20635, -103.81299	Hole Diameter: ~4"	Total Depth: 5'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
					0'	0'		
Moist	924	0.1	Y	PH06	1'	1'	SP-SM	1-2', SILTY SAND to CLAYEY SAND with caliche, brownish red, poorly sorted, moist, stained with slight odor.
Moist	8,456	0.0	N		2'	2'	SP-SM	SAA with no odor and no stained.
Moist	633	0.0	N		3'	3'	SP-SM	SAA
Moist	924	0.0	N	PH06A	4'	4'	SP-SM	SAA and started to hit hard bedrock and caliche.
Dry	<162	0.0	N	PH06B	5'	5'	SP-SM	SAA

TD Total depth at 5' bgs.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name:PH07	Date: 12/15/22
	Site Name: PLU 18 Twin Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03E1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Meredith Roberts	Method: Backhoe
Coordinates: 32.20635, -103.81299	Hole Diameter: ~4"	Total Depth: 4'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
					0'	0'		
Moist	2,576	0.1	N	PH07	1'	1'	SP-SM	1-2', SILTY SAND to CLAYEY SAND with caliche, brownish red, poorly sorted, moist, no stained with slight odor.
Moist	409	0.0	N		2'	2'	SP-SM	SAA with no odor and no stained.
Moist	474	0.0	N		3'	3'	SP-SM	SAA
Moist	364	0.2	N	PH07A	4'	4'	SP-SM	SAA with calcihe mix.
						TD		Total depth at 4' bgs.

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

	Sample Name:PH08	Date: 12/15/22
	Site Name: PLU 18 Twin Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03E1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Meredith Roberts	Method: Backhoe
Coordinates: 32.20635, -103.81299	Hole Diameter: ~4"	Total Depth: 4'

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
					0'	0'		
Moist	633	0.1	N	PH08	1'	1'	SP-SM	1-2', SILTY SAND to CLAYEY SAND with caliche, brownish red, poorly sorted, moist, no stained with slight odor.
Moist	633	0.0	N		2'	2'	SP-SM	SAA with no odor.
Moist	474	0.1	N		3'	3'	SP-SM	SAA
Moist	241	0.0	N	PH08A	4'	4'	SP-SM	SAA
						TD		Total depth at 4' bgs.

ENSOLUM

	Sample Name: SS09/BH09	Date: 9/6/23 & 10/16/23
	Site Name: PLU 18 Twin Wells Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03C1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Mariaha O'Dell	Method: Hand Auger
Coordinates:	Hole Diameter: 4"	Total Depth: 1'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. All chlorides measurements are done with a +40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	5,280	0.0	N	SS10	0.5		CCHE	CCHE. Pad material.
D	<168	0	N	BH09	1	1	SP	Sand. Reddish brown, very fine to fine grained, poorly graded, dry.

Total Depth at 1' bgs.

ENSOLUM

	Sample Name: SS10/BH10	Date: 9/6/23 & 10/16/23
	Site Name: PLU 18 Twin Wells Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03C1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Mariaha O'Dell	Method: Hand Auger
Coordinates:	Hole Diameter: 4"	Total Depth: 1'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. All chlorides measurements are done with a +40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	<162	0.0	N	SS11	0.5		CCHE	CCHE. Pad material.
D	274	0.0	N	BH10	1	1	SP	Sand. Reddish brown, very fine to fine grained, poorly graded, dry.

Total Depth at 1' bgs.

ENSOLUM

	Sample Name: BH01	Date: 9/6/2023
	Site Name: PLU 18 Twin Wells Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03C1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Mariaha O'Dell	Method: Hand Auger
Coordinates:	Hole Diameter: 4"	Total Depth: 5'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. All chlorides measurements are done with a +40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	10,842	0	N	BH01	0.5		CCHE	CCHE. Pad material.
D	1, 809	0	N		1	1	SP	Sand. Reddish brown, very fine to fine grained, poorly graded, dry.
D	907	0	N		2	2		
D	756	0	N		3	3		
D	622	0	N		4	4		
D	230	0	N	BH01A	5	5		

Total Depth @ 5' bgs.

ENSOLUM

	Sample Name: BH02	Date: 9/6/2023
	Site Name: PLU 18 Twin Wells Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03C1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Mariaha O'Dell	Method: Hand Auger
Coordinates:	Hole Diameter: 4"	Total Depth: 3'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. All chlorides measurements are done with a +40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	6,210	0	N	BH02	0.5		CCHE	CCHE. Pad material.
D	1,260	0	N		1	1	SP	Sand. Reddish brown, very fine to fine grained, poorly graded, dry.
D	263	0	N	BH02A	2	2		
D	230	0	N		3	3		

Total Depth @ 3' bgs.

ENSOLUM

	Sample Name: BH03	Date: 9/6/2023
	Site Name: PLU 18 Twin Wells Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03C1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Mariaha O'Dell	Method: Hand Auger
Coordinates:	Hole Diameter: 4"	Total Depth: 2'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. All chlorides measurements are done with a +40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	3,125	0	N	BH03	0.5		CCHE	CCHE. Pad material.
D	829	0	N		1	1	SP	Sand. Reddish brown, very fine to fine grained, poorly graded, dry.
D	392	0	N	BH03A	2	2		

Total Depth at 2' bgs.

ENSOLUM

	Sample Name: BH04	Date: 9/6/2023
	Site Name: PLU 18 Twin Wells Ranch East Satellite	
	Incident Number: NAPP2230551957	
	Job Number: 03C1558144	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Mariaha O'Dell	Method: Hand Auger
Coordinates:	Hole Diameter: 4"	Total Depth: 2'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. All chlorides measurements are done with a +40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	5,729	0	N	BH04	0.5		CCHE	CCHE. Pad material.
D	1,574	0	N		1	1	SP	Sand. Reddish brown, very fine to fine grained, poorly graded, dry.
D	263	0	N	BH04A	2	2		

Total Depth at 2' bgs.

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APPENDIX C

Photographic Log

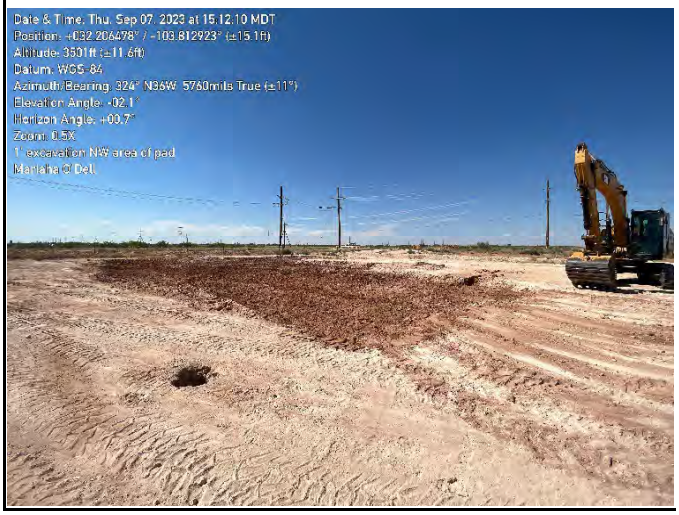
ENSOLUM

Photographic Log
XTO Energy
PLU 18 Twin Wells Ranch East Satellite
NAPP2230551957

Photograph 1 Date: 9/5/2023
Description: Excavation
View: Northwest

Photograph 2 Date: 9/5/2023
Description: Excavation
View: West

Photograph 3 Date: 9/7/2023
Description: Excavation
View: Southeast



Photograph 4 Date: 9/7/2023
Description: Excavation
View: Northwest

ENSOLUM

Photographic Log
XTO Energy
PLU 18 Twin Wells Ranch East Satellite
nAPP2324454223

Photograph 5 Date: 9/7/2023
Description: Excavation
View: Northeast

Photograph 6 Date: 9/5/2023
Description: Excavation
View: northwest

Photograph 7 Date: 9/7/2023
Description: Excavation
View: Southwest

Photograph 8 Date: 10/3/2023
Description: Backfill
View: Northeast

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 284630

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 284630
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	This Remediation Closure Report is approved. Areas reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as they are no longer reasonably needed. A report for reclamation and revegetation will need to be submitted and approved prior to this incident receiving the final status of "Restoration Complete".	2/29/2024