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	NAPP2201444794
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Shelby Pennington	Contact Telephone 281-723-9353
Contact email shelby.g.pennington@exxonmobil.com	Incident # *(assigned by OCD)*
Contact mailing address 6401 Holiday Hill Rd Bldg 5, Midland, Texas, 79707	

Location of Release Source

Latitude 32.01937 Longitude -103.94214
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Ross Draw 25 NW	Site Type Tank Battery
Date Release Discovered 1/02/2022	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
D	25	26S	29E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 88.40	Volume Recovered (bbls) 88.00
☒ Produced Water	Volume Released (bbls) 32.10	Volume Recovered (bbls) 32.00
	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: Corrosion caused a 2" welded nipple to release fluids both into containment and onto pad. All free fluids were recovered. A third-party contractor has been retained for remediation purposes.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2201444794
District RP	
Facility ID	
Application ID	

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

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes, by Adrian Baker to ocd.enviro@state.nm.us; Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD on Monday, January 3, 2022 4:21 PM via email.

Initial Response

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

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

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

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

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

Printed Name: Shelby G. Pennington Title: Environmental Manager

Signature:  Date: 1/14/22

email: shelby.g.pennington@exxonmobil.com Telephone: 281-723-9353

OCD Only

Received by: NAPP2201444794 Date: 1/14/2022

NAPP2201444794

Location:	Ross Draw 25 NW Battery	
Spill Date:	1/2/2022	
Area 1		
Approximate Area =	673.75	cu.ft.
VOLUME OF LEAK		
Total Crude Oil =	88.00	bbls
Total Produced Water =	32.00	bbls
Area 2		
Approximate Area =	636.00	sq. ft.
Average Saturation (or depth) of spill =	1.75	inches

Average Porosity Factor =	0.03	

VOLUME OF LEAK		
Total Crude Oil =	0.40	bbls
Total Produced Water =	0.10	bbls

TOTAL VOLUME OF LEAK		
Total Crude Oil =	**88.40**	**bbls**
Total Produced Water =	**32.10**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**88.00**	**bbls**
Total Produced Water =	**32.00**	**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 72553

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 72553
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rmarcus	None	1/14/2022

Incident ID	NAPP2201444794
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2201444794
District RP	
Facility ID	
Application ID	

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

Printed Name: __Garrett Green _____ Title: ___Environmental Coordinator _____

Signature:_____ _____ Date: ___9/27/2022_____

email: _garrett.green@exxonmobil.com_____ Telephone: ___(575)-200-0729_____

OCD Only

Received by: __Jocelyn Harimon_____ Date: ___10/20/2022___

Incident ID	NAPP2201444794
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Garrett Green Title: Environmental Coordinator

Signature: Date: 09/27/2022

email: Garrett.Green@ExxonMobil.com Telephone: 575-200-0729

OCD Only

Received by: Jocelyn Harimon Date: 10/20/2022

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

Closure Approved by: Date: 01/13/2023

Printed Name: Jocelyn Harimon Title: Environmental Specialist

ENSOLUM

September 27, 2022

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

Re: Closure Request Addendum
Ross Draw 25 NW Tank Battery
Incident Number NAPP2201444794
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following Addendum to a Closure Request submitted on June 24, 2022 for a release at the Ross Draw 25 NW Tank Battery (Site; Figure 1). This Addendum provides an update to the delineation and excavation activities completed at the Site in response to the denial by the New Mexico Oil Conservation Division (NMOCD) of the previously submitted Closure Request. In the denial, NMOCD expressed concern the release was not horizontally delineated at a secondary containment wall. Based on previous delineation and excavation sampling activities and additional sampling results described below, XTO is requesting no further action (NFA) for Incident Number NAPP2201444794.

BACKGROUND

On January 2, 2022, corrosion on a 2-inch welded nipple resulted in the release of approximately 88.4 barrels (bbls) of crude oil and approximately 32.10 bbls produced water into a lined secondary containment and onto the well pad surface. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 88 bbls of crude oil and 32 bbls of produced water were recovered. XTO reported the release to the NMOCD on January 3, 2022 and with a subsequent Release Notification Form C-141 (Form C-141) on January 14, 2022. The release was assigned Incident Number NAPP2201444794.

A Closure Request detailing site characterization and application of Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC) assigned the following Closure Criteria:

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

Site assessment activities were conducted to assess for the presence or absence of impacts to soil resulting from the produced water and crude oil release. The liner was determined to be in good condition; however, Ensolum observed surficial staining in the release area outside the containment. As a result, excavation of stained soil was completed to a depth of 2 feet bgs across a 350 square foot area.

Laboratory analytical results for excavation confirmation samples indicated all concentrations of chemicals of concern (COC) were compliant with the Table 1 Closure Criteria and compliant with the most stringent Table 1 Closure Criteria. Additionally, the release was horizontally delineated to below the most stringent Table 1 Closure Criteria as indicated by three soil samples collected outside of the release footprint. Laboratory analytical results from the sampling activities are summarized in Table 1 and soil sample locations are depicted on Figures 2 and 3, which were presented in the original Closure Request. Because the excavation abutted the secondary containment wall and the liner inspection indicated the liner was not compromised, no sidewall or delineation samples were collected at the containment. On July 15, 2022, NMOCD denied the Closure Request for Incident Number NAPP2201444794 for the following reason:

- *"The closure request is denied. The release should be horizontally delineated on all sides, including up against the secondary containment wall. Please verify that the release did not go under the secondary containment."*

ADDITIONAL DELINEATION ACTIVITIES

On August 3, 2022, Ensolum personnel returned to the Site to collect one additional horizontal confirmation soil sample against the secondary containment wall. Soil sample, SW03 was collected from the sidewall of the excavation from the ground surface to 2 feet bgs. The 5-point composite sample was collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the sample by thoroughly mixing. The soil sample was placed directly into pre-cleaned glass jar, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil sample was transported at or below 4 degrees Celsius (°C) under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following 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. The soil sample location is depicted on Figure 3.

Laboratory analytical results for SW03 indicate all COC concentrations were compliant with Site Closure Criteria and provided horizontal delineation to below the most stringent Table 1 Closure Criteria. The soil sample analytical results are summarized on Table 1 and the complete laboratory analytical reports are included as Appendix A.

CLOSURE REQUEST

XTO requested NFA of Incident Number NAPP2201444794 on June 24, 2022 based on site assessment and remediation activities that followed requirements set forth in 19.15.29 NMAC. Additional assessment activities were completed at the Site to assess for the presence or absence of impacts to soil resulting from the January 2, 2022, crude oil and produced water release. Based on the laboratory analytical results of the newly collected confirmation sidewall sample SW03 and previously reported samples indicating the excavation is in compliance with the Site Closure Criteria and horizontal delineation soil samples providing additional data indicating compliance with the most stringent Table 1 Closure Criteria, XTO respectfully request NFA for Incident Number NAPP2201444794.

If you have any questions or comments, please contact Ms. Ashley Ager at (970) 496-1093 or aager@ensolum.com.

Sincerely,
Ensolum, LLC

Anita Thapalia, PG
Project Geologist

Ashley Ager, PG
Program Director

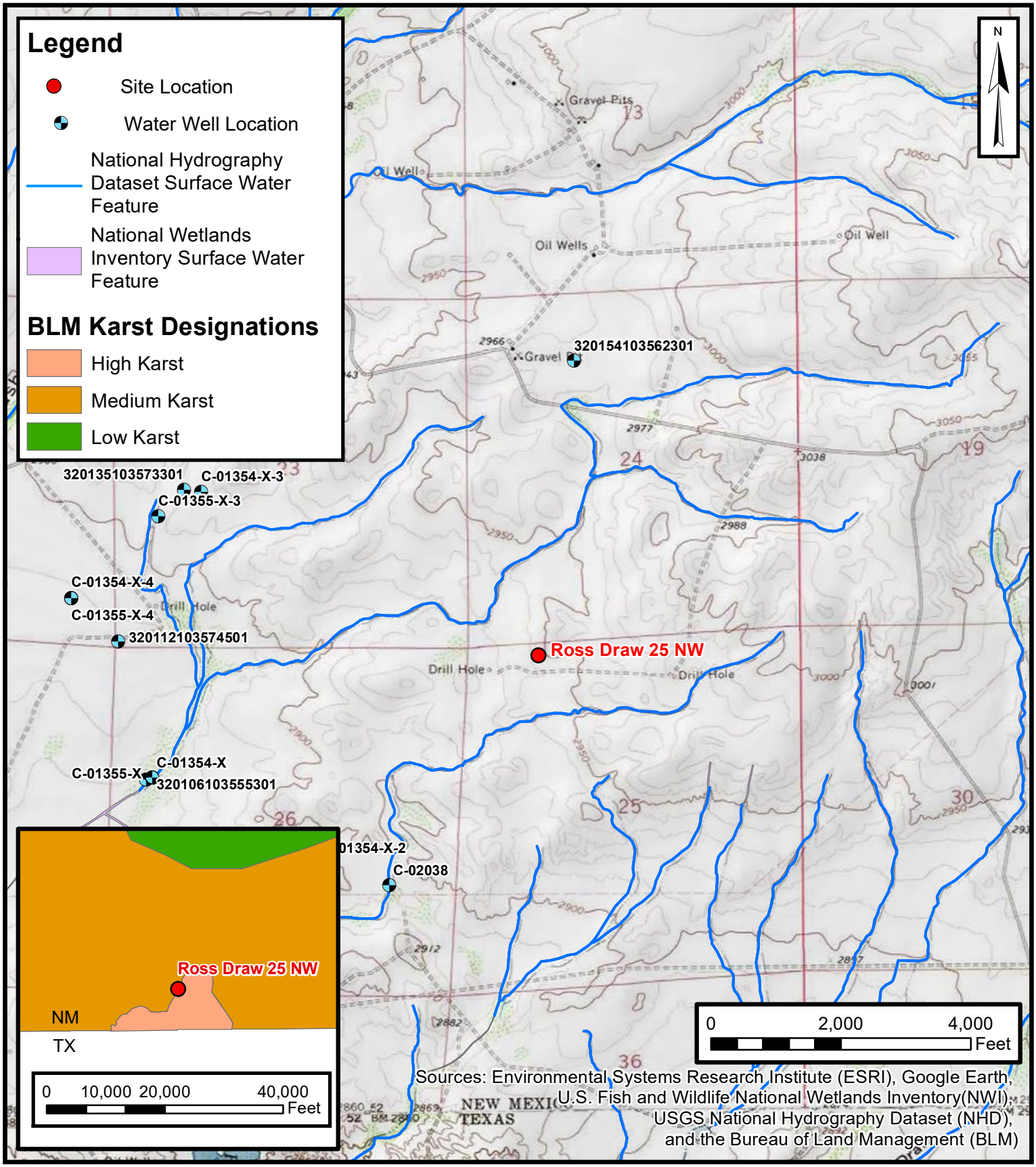
cc: Garrett Green, XTO
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	2022 Laboratory Analytical Report

ENSOLUM

FIGURES



ENSOLUM
Environmental & Hydrogeologic Consultants

Site Receptor Map

XTO ENERGY, INC
Ross Draw 25 NW
NAPP2201444794
Unit D, Sec 25, T26S, R29E
Eddy County, New Mexico

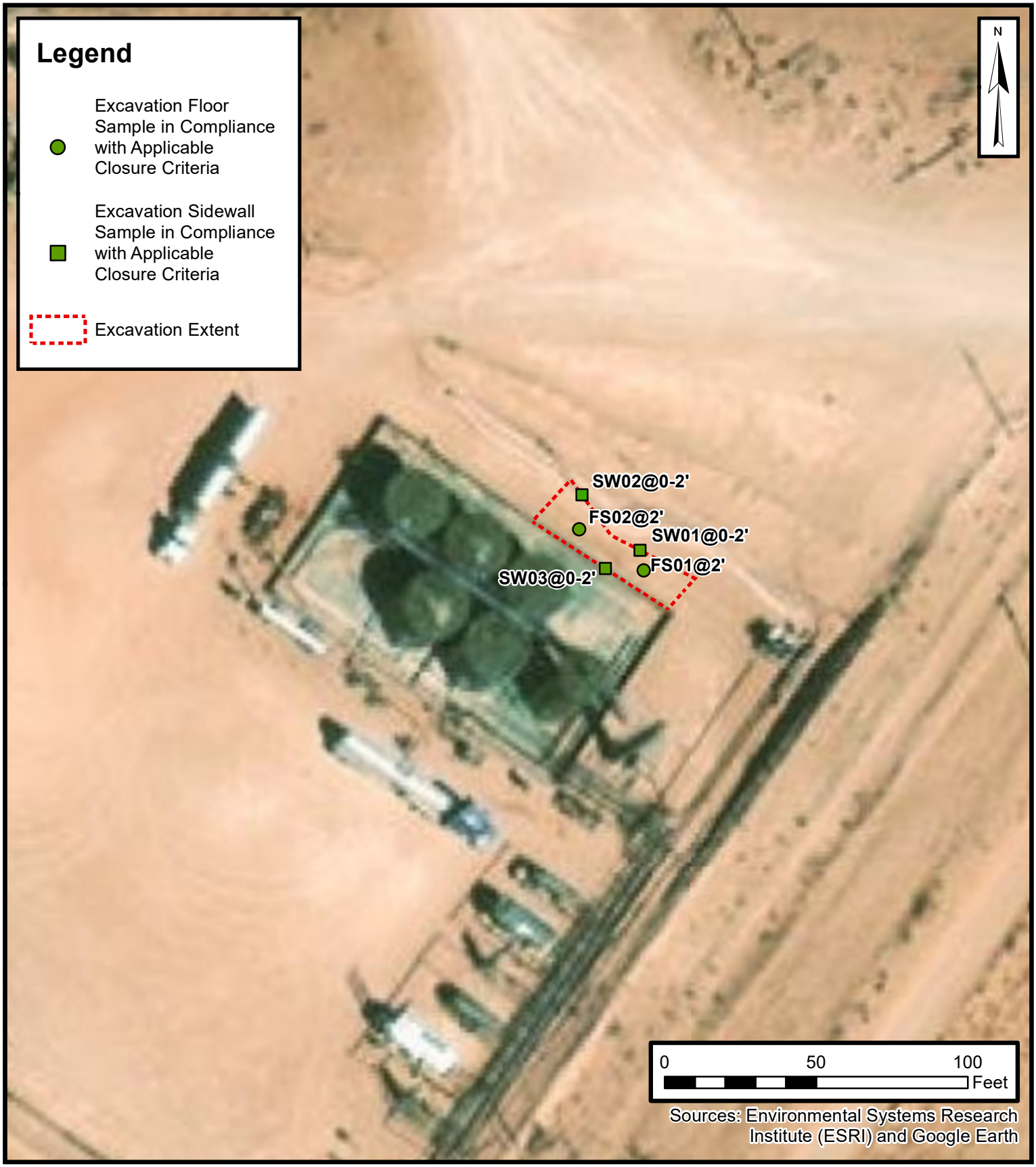
FIGURE
1

ENSOLUM
Environmental & Hydrogeologic Consultants

Preliminary Soil Sample Locations

XTO ENERGY, INC
Ross Draw 25 NW
NAPP2201444794
Unit D, Sec 25, T26S, R29E
Eddy County, New Mexico

FIGURE
2



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Environmental & Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO ENERGY, INC
Ross Draw 25 NW
NAPP2201444794
Unit D, Sec 25, T26S, R29E
Eddy County, New Mexico

FIGURE
3

ENSOLUM

TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Ross Draw 25 NW Tank Battery
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**10,000**
Preliminary Soil Samples										
SS01	02/14/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	**10,400**
SS02	02/14/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	51.3
SS03	02/14/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	152
SS04	02/14/2022	0.5	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	46.1
Excavation Floor Samples										
FS01	05/18/2022	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	128
FS02	05/18/2022	2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	255
Excavation Sidewall Samples										
SW01	05/18/2022	0 - 2	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	118
SW02	05/18/2022	0 - 2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	57.5
SW03	08/03/2022	0 - 2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	37.7

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon

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APPENDIX A

2022 Laboratory

Analytical Reports

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-1943-1
Laboratory SDG: 31403236.022.0129. task 19.02
Client Project/Site: Ross Draw 25 NM Battery

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Kalei Jennings

JKramer

Authorized for release by:
2/22/2022 3:42:24 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

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

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

Client: WSP USA Inc.
Project/Site: Ross Draw 25 NM Battery

Laboratory Job ID: 890-1943-1
SDG: 31403236.022.0129. task 19.02

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1943-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129. task 19.02

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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.

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: WSP USA Inc. Job ID: 890-1943-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129. task 19.02

Job ID: 890-1943-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-1943-1

Receipt
The sample was received on 2/15/2022 9:25 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 0.4°C

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: SS04 (890-1943-1) and (880-11299-A-1-J). 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 880-19793 and analytical batch 880-19796 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-19555 and analytical batch 880-19569 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-11287-A-38-E MS). Evidence of matrix interferences is not obvious.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-19775 and analytical batch 880-19870 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: WSP USA Inc. Job ID: 890-1943-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129. task 19.02

Client Sample ID: SS04 Lab Sample ID: 890-1943-1

Date Collected: 02/14/22 12:10 **Matrix: Solid**
Date Received: 02/15/22 09:25
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		02/18/22 09:11	02/19/22 22:58	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/18/22 09:11	02/19/22 22:58	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/18/22 09:11	02/19/22 22:58	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		02/18/22 09:11	02/19/22 22:58	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/18/22 09:11	02/19/22 22:58	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		02/18/22 09:11	02/19/22 22:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*168*	*S1+*	*70 - 130*	*02/18/22 09:11*	*02/19/22 22:58*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*02/18/22 09:11*	*02/19/22 22:58*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			02/22/22 12:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/17/22 13:29	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 19:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 19:37	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*02/16/22 08:38*	*02/16/22 19:37*	*1*
o-Terphenyl	*95*		*70 - 130*	*02/16/22 08:38*	*02/16/22 19:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**46.1**		4.97		mg/Kg			02/18/22 23:00	1

Surrogate Summary

Client: WSP USA Inc. Job ID: 890-1943-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129. task 19.02

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)
880-11299-A-1-H MS	Matrix Spike	144 S1+	81
880-11299-A-1-I MSD	Matrix Spike Duplicate	139 S1+	96
890-1943-1	SS04	168 S1+	92
LCS 880-19793/1-A	Lab Control Sample	115	89
LCSD 880-19793/2-A	Lab Control Sample Dup	145 S1+	89
MB 880-19708/5-A	Method Blank	102	77
MB 880-19793/5-A	Method Blank	103	77

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-11287-A-38-E MS	Matrix Spike	71	66 S1-
880-11287-A-38-F MSD	Matrix Spike Duplicate	84	77
890-1943-1	SS04	91	95

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO2	OTPH2
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
LCS 880-19555/2-A	Lab Control Sample	108	123
LCSD 880-19555/3-A	Lab Control Sample Dup	102	118
MB 880-19555/1-A	Method Blank	82	91

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: Ross Draw 25 NM Battery

Job ID: 890-1943-1
SDG: 31403236.022.0129. task 19.02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-19708/5-A
Matrix: Solid
Analysis Batch: 19796

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19708

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:00	02/19/22 07:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:00	02/19/22 07:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:00	02/19/22 07:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/18/22 08:00	02/19/22 07:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:00	02/19/22 07:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/18/22 08:00	02/19/22 07:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*02/18/22 08:00*	*02/19/22 07:56*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*02/18/22 08:00*	*02/19/22 07:56*	*1*

Lab Sample ID: MB 880-19793/5-A
Matrix: Solid
Analysis Batch: 19796

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19793

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/18/22 09:11	02/19/22 22:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/18/22 09:11	02/19/22 22:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/18/22 09:11	02/19/22 22:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/18/22 09:11	02/19/22 22:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/18/22 09:11	02/19/22 22:03	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/18/22 09:11	02/19/22 22:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*02/18/22 09:11*	*02/19/22 22:03*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*02/18/22 09:11*	*02/19/22 22:03*	*1*

Lab Sample ID: LCS 880-19793/1-A
Matrix: Solid
Analysis Batch: 19796

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19793

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.07587		mg/Kg		76	70 - 130		
Toluene			0.100	0.07526		mg/Kg		75	70 - 130		
Ethylbenzene			0.100	0.07693		mg/Kg		77	70 - 130		
m-Xylene & p-Xylene			0.200	0.1567		mg/Kg		78	70 - 130		
o-Xylene			0.100	0.07923		mg/Kg		79	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: LCSD 880-19793/2-A
Matrix: Solid
Analysis Batch: 19796

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 19793

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09073		mg/Kg		91	70 - 130	18	35

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1943-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129. task 19.02

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

Lab Sample ID: LCSD 880-19793/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19796 **Prep Batch: 19793**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.09648		mg/Kg		96	70 - 130	25	35
Ethylbenzene			0.100	0.08867		mg/Kg		89	70 - 130	14	35
m-Xylene & p-Xylene			0.200	0.1910		mg/Kg		96	70 - 130	20	35
o-Xylene			0.100	0.1058		mg/Kg		106	70 - 130	29	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*145*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: 880-11299-A-1-H MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19796 **Prep Batch: 19793**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.0996	0.08199		mg/Kg		82	70 - 130
Toluene	<0.00200	U F1	0.0996	0.07571		mg/Kg		76	70 - 130
Ethylbenzene	<0.00200	U F1	0.0996	0.06193	F1	mg/Kg		62	70 - 130
m-Xylene & p-Xylene	<0.00399	U F1	0.199	0.1174	F1	mg/Kg		59	70 - 130
o-Xylene	<0.00200	U F1	0.0996	0.06428	F1	mg/Kg		65	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*144*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*

Lab Sample ID: 880-11299-A-1-I MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19796 **Prep Batch: 19793**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.07496		mg/Kg		75	70 - 130	9	35
Toluene	<0.00200	U F1	0.100	0.06880	F1	mg/Kg		69	70 - 130	10	35
Ethylbenzene	<0.00200	U F1	0.100	0.05698	F1	mg/Kg		57	70 - 130	8	35
m-Xylene & p-Xylene	<0.00399	U F1	0.200	0.1075	F1	mg/Kg		54	70 - 130	9	35
o-Xylene	<0.00200	U F1	0.100	0.06171	F1	mg/Kg		62	70 - 130	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*139*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-19555/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19569 **Prep Batch: 19555**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 11:41	1

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1943-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129. task 19.02

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

Lab Sample ID: MB 880-19555/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19569 **Prep Batch: 19555**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 11:41	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*02/16/22 08:38*	*02/16/22 11:41*	*1*
o-Terphenyl	*91*		*70 - 130*	*02/16/22 08:38*	*02/16/22 11:41*	*1*

Lab Sample ID: LCS 880-19555/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19569 **Prep Batch: 19555**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1005		mg/Kg		100	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1044		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*123*		*70 - 130*

Lab Sample ID: LCSD 880-19555/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19569 **Prep Batch: 19555**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	975.8		mg/Kg		98	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	1013		mg/Kg		101	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*102*		*70 - 130*
o-Terphenyl	*118*		*70 - 130*

Lab Sample ID: 880-11287-A-38-E MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19569 **Prep Batch: 19555**

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 F2	1000	933.5		mg/Kg		91	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U F1	1000	1195		mg/Kg		120	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*71*		*70 - 130*
o-Terphenyl	*66*	*S1-*	*70 - 130*

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1943-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129. task 19.02

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

Lab Sample ID: 880-11287-A-38-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19569 — **Prep Batch: 19555**

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 F2	998	1256	F2	mg/Kg		123	70 - 130	29	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	998	1394	F1	mg/Kg		140	70 - 130	15	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*84*		*70 - 130*
o-Terphenyl	*77*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-19775/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19870

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/18/22 21:44	1

Lab Sample ID: LCS 880-19775/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19870

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	254.5		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-19775/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19870

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	268.2		mg/Kg		107	90 - 110	5	20

Lab Sample ID: 890-1935-A-1-K MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19870

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	158	F1	253	327.2	F1	mg/Kg		67	90 - 110		

Lab Sample ID: 890-1935-A-1-L MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19870

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	158	F1	253	280.2	F1	mg/Kg		49	90 - 110	15	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1943-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129. task 19.02

GC VOA

Prep Batch: 19708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-19708/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 19793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1943-1	SS04	Total/NA	Solid	5035	
MB 880-19793/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-19793/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-19793/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-11299-A-1-H MS	Matrix Spike	Total/NA	Solid	5035	
880-11299-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 19796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1943-1	SS04	Total/NA	Solid	8021B	19793
MB 880-19708/5-A	Method Blank	Total/NA	Solid	8021B	19708
MB 880-19793/5-A	Method Blank	Total/NA	Solid	8021B	19793
LCS 880-19793/1-A	Lab Control Sample	Total/NA	Solid	8021B	19793
LCSD 880-19793/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	19793
880-11299-A-1-H MS	Matrix Spike	Total/NA	Solid	8021B	19793
880-11299-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	19793

Analysis Batch: 20044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1943-1	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 19555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1943-1	SS04	Total/NA	Solid	8015NM Prep	
MB 880-19555/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-19555/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-19555/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-11287-A-38-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-11287-A-38-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 19569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1943-1	SS04	Total/NA	Solid	8015B NM	19555
MB 880-19555/1-A	Method Blank	Total/NA	Solid	8015B NM	19555
LCS 880-19555/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	19555
LCSD 880-19555/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	19555
880-11287-A-38-E MS	Matrix Spike	Total/NA	Solid	8015B NM	19555
880-11287-A-38-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	19555

Analysis Batch: 19700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1943-1	SS04	Total/NA	Solid	8015 NM	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1943-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129. task 19.02

HPLC/IC

Leach Batch: 19775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1943-1	SS04	Soluble	Solid	DI Leach	
MB 880-19775/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-19775/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-19775/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1935-A-1-K MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1935-A-1-L MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 19870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1943-1	SS04	Soluble	Solid	300.0	19775
MB 880-19775/1-A	Method Blank	Soluble	Solid	300.0	19775
LCS 880-19775/2-A	Lab Control Sample	Soluble	Solid	300.0	19775
LCSD 880-19775/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	19775
890-1935-A-1-K MS	Matrix Spike	Soluble	Solid	300.0	19775
890-1935-A-1-L MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	19775

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Ross Draw 25 NM Battery

Job ID: 890-1943-1
SDG: 31403236.022.0129. task 19.02

Client Sample ID: SS04

Date Collected: 02/14/22 12:10
Date Received: 02/15/22 09:25

Lab Sample ID: 890-1943-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19793	02/18/22 09:11	KL	XEN MID
Total/NA	Analysis	8021B		1	19796	02/19/22 22:58	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	20044	02/22/22 12:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19700	02/17/22 13:29	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19555	02/16/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19569	02/16/22 19:37	AJ	XEN MID
Soluble	Leach	DI Leach			19775	02/17/22 21:52	CH	XEN MID
Soluble	Analysis	300.0		1	19870	02/18/22 23:00	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-1943-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129. task 19.02

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	T104704400-21-22	06-30-22

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: WSP USA Inc. Job ID: 890-1943-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129. task 19.02

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

Protocol References:

ASTM = ASTM International

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: Ross Draw 25 NM Battery

Job ID: 890-1943-1
SDG: 31403236.022.0129. task 19.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1943-1	SS04	Solid	02/14/22 12:10	02/15/22 09:25	0.5

Chain of Custody

Work Order No: _____

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

www.xenco.com Page 1 of 1

Project Manager:	Kalei Jennings	Bill to: (if different)	Amy Ruth
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, Texas 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432 704 5178	Email:	amy.ruth@exxonmobil.com,aimee.cole@wsp.com

Work Order Comments

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

Project Name:	Ross Draw 25 NM Battery	Turn Around	
Project Number:	31403236.022.0129 Task 19.02	Routine	☑
P.O. Number:	NAPP2201444794	Rush:	
Sampler's Name:	Mercy Rotich.	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	2.6/0.4	Thermometer ID	IR-007
Received Intact:	Yes No	Correction Factor:	-0.2
Cooler Custody Seals:	Yes No N/A	Total Containers:	
Sample Custody Seals:	Yes No N/A		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
SS04	S	02/14/22	12:10	0.5'	1	X	X	X	Discrete

890-1943 Chain of Custody

Work Order Notes

CC: 1056301001

TAT starts the day recevied by the lab, if received by 4:30pm

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 SiO2 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 **1631 / 245.1 / 7470 / 7471** : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		2-15-220925	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1943-1
SDG Number: 31403236.022.0129. task 19.02

Login Number: 1943
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1943-1
SDG Number: 31403236.022.0129. task 19.02

Login Number: 1943
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 02/16/22 12:10 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

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

Laboratory Job ID: 890-1944-1
Laboratory SDG: 31403236.022.0129.task.19.02
Client Project/Site: Ross Draw 25 NM Batery

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Kalei Jennings

Authorized for release by:
2/22/2022 3:37:57 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

Client: WSP USA Inc.
Project/Site: Ross Draw 25 NM Batery

Laboratory Job ID: 890-1944-1
SDG: 31403236.022.0129.task.19.02

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1944-1
Project/Site: Ross Draw 25 NM Batery SDG: 31403236.022.0129.task.19.02

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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.

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: WSP USA Inc. Job ID: 890-1944-1
Project/Site: Ross Draw 25 NM Batery SDG: 31403236.022.0129.task.19.02

Job ID: 890-1944-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-1944-1

Receipt
The sample was received on 2/15/2022 9:25 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 0.4°C

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: SS03 (890-1944-1) and (880-11299-A-1-J). 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 880-19793 and analytical batch 880-19796 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-19555 and analytical batch 880-19569 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-11287-A-38-E MS). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: WSP USA Inc. Job ID: 890-1944-1
Project/Site: Ross Draw 25 NM Batery SDG: 31403236.022.0129.task.19.02

Client Sample ID: SS03 **Lab Sample ID: 890-1944-1**
Date Collected: 02/14/22 13:20 **Matrix: Solid**
Date Received: 02/15/22 09:25
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/18/22 09:11	02/19/22 23:26	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/18/22 09:11	02/19/22 23:26	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/18/22 09:11	02/19/22 23:26	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/18/22 09:11	02/19/22 23:26	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/18/22 09:11	02/19/22 23:26	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/18/22 09:11	02/19/22 23:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*134*	*S1+*	*70 - 130*	*02/18/22 09:11*	*02/19/22 23:26*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*02/18/22 09:11*	*02/19/22 23:26*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/22/22 12:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/17/22 13:29	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 19:57	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 19:57	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 19:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*02/16/22 08:38*	*02/16/22 19:57*	*1*
o-Terphenyl	*100*		*70 - 130*	*02/16/22 08:38*	*02/16/22 19:57*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**152**		24.9		mg/Kg			02/20/22 19:42	5

Surrogate Summary

Client: WSP USA Inc. Job ID: 890-1944-1
Project/Site: Ross Draw 25 NM Batery SDG: 31403236.022.0129.task.19.02

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)										
880-11299-A-1-H MS	Matrix Spike	144 S1+	81										
880-11299-A-1-I MSD	Matrix Spike Duplicate	139 S1+	96										
890-1944-1	SS03	134 S1+	102										
LCS 880-19793/1-A	Lab Control Sample	115	89										
LCSD 880-19793/2-A	Lab Control Sample Dup	145 S1+	89										
MB 880-19708/5-A	Method Blank	102	77										
MB 880-19793/5-A	Method Blank	103	77										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)										
880-11287-A-38-E MS	Matrix Spike	71	66 S1-										
880-11287-A-38-F MSD	Matrix Spike Duplicate	84	77										
890-1944-1	SS03	94	100										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

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	1CO2 (70-130)	OTPH2 (70-130)										
LCS 880-19555/2-A	Lab Control Sample	108	123										
LCSD 880-19555/3-A	Lab Control Sample Dup	102	118										
MB 880-19555/1-A	Method Blank	82	91										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1944-1
Project/Site: Ross Draw 25 NM Batery SDG: 31403236.022.0129.task.19.02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-19708/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19796 — **Prep Batch: 19708**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:00	02/19/22 07:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:00	02/19/22 07:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:00	02/19/22 07:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/18/22 08:00	02/19/22 07:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:00	02/19/22 07:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/18/22 08:00	02/19/22 07:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*02/18/22 08:00*	*02/19/22 07:56*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*02/18/22 08:00*	*02/19/22 07:56*	*1*

Lab Sample ID: MB 880-19793/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19796 — **Prep Batch: 19793**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/18/22 09:11	02/19/22 22:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/18/22 09:11	02/19/22 22:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/18/22 09:11	02/19/22 22:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/18/22 09:11	02/19/22 22:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/18/22 09:11	02/19/22 22:03	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/18/22 09:11	02/19/22 22:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*02/18/22 09:11*	*02/19/22 22:03*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*02/18/22 09:11*	*02/19/22 22:03*	*1*

Lab Sample ID: LCS 880-19793/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19796 — **Prep Batch: 19793**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.07587		mg/Kg		76	70 - 130		
Toluene			0.100	0.07526		mg/Kg		75	70 - 130		
Ethylbenzene			0.100	0.07693		mg/Kg		77	70 - 130		
m-Xylene & p-Xylene			0.200	0.1567		mg/Kg		78	70 - 130		
o-Xylene			0.100	0.07923		mg/Kg		79	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: LCSD 880-19793/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19796 — **Prep Batch: 19793**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09073		mg/Kg		91	70 - 130	18	35

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1944-1
Project/Site: Ross Draw 25 NM Batery SDG: 31403236.022.0129.task.19.02

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

Lab Sample ID: LCSD 880-19793/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19796 **Prep Batch: 19793**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.09648		mg/Kg		96	70 - 130	25	35
Ethylbenzene			0.100	0.08867		mg/Kg		89	70 - 130	14	35
m-Xylene & p-Xylene			0.200	0.1910		mg/Kg		96	70 - 130	20	35
o-Xylene			0.100	0.1058		mg/Kg		106	70 - 130	29	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*145*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: 880-11299-A-1-H MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19796 **Prep Batch: 19793**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.0996	0.08199		mg/Kg		82	70 - 130
Toluene	<0.00200	U F1	0.0996	0.07571		mg/Kg		76	70 - 130
Ethylbenzene	<0.00200	U F1	0.0996	0.06193	F1	mg/Kg		62	70 - 130
m-Xylene & p-Xylene	<0.00399	U F1	0.199	0.1174	F1	mg/Kg		59	70 - 130
o-Xylene	<0.00200	U F1	0.0996	0.06428	F1	mg/Kg		65	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*144*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*

Lab Sample ID: 880-11299-A-1-I MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19796 **Prep Batch: 19793**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.07496		mg/Kg		75	70 - 130	9	35
Toluene	<0.00200	U F1	0.100	0.06880	F1	mg/Kg		69	70 - 130	10	35
Ethylbenzene	<0.00200	U F1	0.100	0.05698	F1	mg/Kg		57	70 - 130	8	35
m-Xylene & p-Xylene	<0.00399	U F1	0.200	0.1075	F1	mg/Kg		54	70 - 130	9	35
o-Xylene	<0.00200	U F1	0.100	0.06171	F1	mg/Kg		62	70 - 130	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*139*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-19555/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19569 **Prep Batch: 19555**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 11:41	1

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1944-1
Project/Site: Ross Draw 25 NM Batery SDG: 31403236.022.0129.task.19.02

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

Lab Sample ID: MB 880-19555/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19569 **Prep Batch: 19555**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 11:41	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*02/16/22 08:38*	*02/16/22 11:41*	*1*
o-Terphenyl	*91*		*70 - 130*	*02/16/22 08:38*	*02/16/22 11:41*	*1*

Lab Sample ID: LCS 880-19555/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19569 **Prep Batch: 19555**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1005		mg/Kg		100	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1044		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*123*		*70 - 130*

Lab Sample ID: LCSD 880-19555/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19569 **Prep Batch: 19555**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	975.8		mg/Kg		98	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	1013		mg/Kg		101	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*102*		*70 - 130*
o-Terphenyl	*118*		*70 - 130*

Lab Sample ID: 880-11287-A-38-E MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19569 **Prep Batch: 19555**

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 F2	1000	933.5		mg/Kg		91	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U F1	1000	1195		mg/Kg		120	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*71*		*70 - 130*
o-Terphenyl	*66*	*S1-*	*70 - 130*

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1944-1
Project/Site: Ross Draw 25 NM Batery SDG: 31403236.022.0129.task.19.02

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

Lab Sample ID: 880-11287-A-38-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19569 — **Prep Batch: 19555**

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 F2	998	1256	F2	mg/Kg		123	70 - 130	29	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	998	1394	F1	mg/Kg		140	70 - 130	15	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*84*		*70 - 130*
o-Terphenyl	*77*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-19776/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19882

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/20/22 17:28	1

Lab Sample ID: LCS 880-19776/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19882

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	256.5		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-19776/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19882

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	259.0		mg/Kg		104	90 - 110	1	20

Lab Sample ID: 890-1938-A-6-M MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19882

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	89.9		250	327.9		mg/Kg		95	90 - 110		

Lab Sample ID: 890-1938-A-6-N MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19882

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	89.9		250	340.5		mg/Kg		100	90 - 110	4	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1944-1
Project/Site: Ross Draw 25 NM Batery SDG: 31403236.022.0129.task.19.02

GC VOA

Prep Batch: 19708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-19708/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 19793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1944-1	SS03	Total/NA	Solid	5035	
MB 880-19793/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-19793/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-19793/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-11299-A-1-H MS	Matrix Spike	Total/NA	Solid	5035	
880-11299-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 19796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1944-1	SS03	Total/NA	Solid	8021B	19793
MB 880-19708/5-A	Method Blank	Total/NA	Solid	8021B	19708
MB 880-19793/5-A	Method Blank	Total/NA	Solid	8021B	19793
LCS 880-19793/1-A	Lab Control Sample	Total/NA	Solid	8021B	19793
LCSD 880-19793/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	19793
880-11299-A-1-H MS	Matrix Spike	Total/NA	Solid	8021B	19793
880-11299-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	19793

Analysis Batch: 20045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1944-1	SS03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 19555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1944-1	SS03	Total/NA	Solid	8015NM Prep	
MB 880-19555/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-19555/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-19555/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-11287-A-38-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-11287-A-38-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 19569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1944-1	SS03	Total/NA	Solid	8015B NM	19555
MB 880-19555/1-A	Method Blank	Total/NA	Solid	8015B NM	19555
LCS 880-19555/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	19555
LCSD 880-19555/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	19555
880-11287-A-38-E MS	Matrix Spike	Total/NA	Solid	8015B NM	19555
880-11287-A-38-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	19555

Analysis Batch: 19701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1944-1	SS03	Total/NA	Solid	8015 NM	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1944-1
Project/Site: Ross Draw 25 NM Batery SDG: 31403236.022.0129.task.19.02

HPLC/IC

Leach Batch: 19776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1944-1	SS03	Soluble	Solid	DI Leach	
MB 880-19776/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-19776/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-19776/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1938-A-6-M MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1938-A-6-N MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 19882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1944-1	SS03	Soluble	Solid	300.0	19776
MB 880-19776/1-A	Method Blank	Soluble	Solid	300.0	19776
LCS 880-19776/2-A	Lab Control Sample	Soluble	Solid	300.0	19776
LCSD 880-19776/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	19776
890-1938-A-6-M MS	Matrix Spike	Soluble	Solid	300.0	19776
890-1938-A-6-N MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	19776

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Ross Draw 25 NM Batery

Job ID: 890-1944-1
SDG: 31403236.022.0129.task.19.02

Client Sample ID: SS03

Date Collected: 02/14/22 13:20
Date Received: 02/15/22 09:25

Lab Sample ID: 890-1944-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19793	02/18/22 09:11	KL	XEN MID
Total/NA	Analysis	8021B		1	19796	02/19/22 23:26	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	20045	02/22/22 12:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19701	02/17/22 13:29	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19555	02/16/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19569	02/16/22 19:57	AJ	XEN MID
Soluble	Leach	DI Leach			19776	02/17/22 21:54	CH	XEN MID
Soluble	Analysis	300.0		5	19882	02/20/22 19:42	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-1944-1
Project/Site: Ross Draw 25 NM Batery SDG: 31403236.022.0129.task.19.02

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	T104704400-21-22	06-30-22

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: WSP USA Inc. Job ID: 890-1944-1
Project/Site: Ross Draw 25 NM Batery SDG: 31403236.022.0129.task.19.02

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

Protocol References:

ASTM = ASTM International

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: Ross Draw 25 NM Batery

Job ID: 890-1944-1
SDG: 31403236.022.0129.task.19.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1944-1	SS03	Solid	02/14/22 13:20	02/15/22 09:25	0.5

Chain of Custody

Work Order No: _____

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

www.xenco.com Page 1 of 1

Project Manager:	Kalei Jennings	Bill to: (if different)	Amy Ruth
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, Texas 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432 704 5178	Email:	amy.ruth@exxonmobil.com,aimee.cole@wsp.com

Work Order Comments

Program: UST/PST ☐ RP ☐ Brownfields ☐ RC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ T/UST ☐ RP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Ross Draw 25 NM Battery	Turn Around	
Project Number:	31403236.022.0129 Task 19.02	Routine	☑
P.O. Number:	NAPP2201444794	Rush:	
Sampler's Name:	Mercy Rotich.	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes / No	Wet Ice:	Yes / No
Temperature (°C):	0.4/0.4	Thermometer ID	IRM-007
Received Intact:	Yes / No		
Cooler Custody Seals:	Yes / No / N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes / No / N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS03	S	02/14/22	13:20	0.5'	1	X	X	X

890-1944 Chain of Custody

Work Order Notes

CC: 1056301001

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

Discrete

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 SiO2 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 **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			2.15.22 0925	2		
3				4		
5				6		

Revised Date 051418 Rev 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1944-1
SDG Number: 31403236.022.0129.task.19.02

Login Number: 1944
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Job Number: 890-1944-1
SDG Number: 31403236.022.0129.task.19.02

Login Number: 1944
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 02/16/22 12:10 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

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

Laboratory Job ID: 890-1945-1
Laboratory SDG: 31403236.022.0129task19.02
Client Project/Site: Ross Draw 25 NM Battery

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Kalei Jennings

JKramer

Authorized for release by:
2/22/2022 3:38:00 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

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

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

Client: WSP USA Inc.
Project/Site: Ross Draw 25 NM Battery

Laboratory Job ID: 890-1945-1
SDG: 31403236.022.0129task19.02

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1945-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129task19.02

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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.

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: WSP USA Inc. Job ID: 890-1945-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129task19.02

Job ID: 890-1945-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-1945-1

Receipt
The sample was received on 2/15/2022 9:36 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 0.4°C

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: SS02 (890-1945-1) and (880-11299-A-1-J). 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 880-19793 and analytical batch 880-19796 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-19555 and analytical batch 880-19569 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-11287-A-38-E MS). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: WSP USA Inc. Job ID: 890-1945-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129task19.02

Client Sample ID: SS02 **Lab Sample ID: 890-1945-1**
Date Collected: 02/14/22 12:02 **Matrix: Solid**
Date Received: 02/15/22 09:36
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/18/22 09:11	02/19/22 23:53	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/18/22 09:11	02/19/22 23:53	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/18/22 09:11	02/19/22 23:53	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/18/22 09:11	02/19/22 23:53	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/18/22 09:11	02/19/22 23:53	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/18/22 09:11	02/19/22 23:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*149*	*S1+*	*70 - 130*	*02/18/22 09:11*	*02/19/22 23:53*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*02/18/22 09:11*	*02/19/22 23:53*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/22/22 12:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/17/22 13:29	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/16/22 08:38	02/16/22 20:18	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/16/22 08:38	02/16/22 20:18	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/16/22 08:38	02/16/22 20:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*02/16/22 08:38*	*02/16/22 20:18*	*1*
o-Terphenyl	*96*		*70 - 130*	*02/16/22 08:38*	*02/16/22 20:18*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**51.3**		4.95		mg/Kg			02/20/22 20:01	1

Surrogate Summary

Client: WSP USA Inc. Job ID: 890-1945-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129task19.02

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)
880-11299-A-1-H MS	Matrix Spike	144 S1+	81
880-11299-A-1-I MSD	Matrix Spike Duplicate	139 S1+	96
890-1945-1	SS02	149 S1+	96
LCS 880-19793/1-A	Lab Control Sample	115	89
LCSD 880-19793/2-A	Lab Control Sample Dup	145 S1+	89
MB 880-19708/5-A	Method Blank	102	77
MB 880-19793/5-A	Method Blank	103	77

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-11287-A-38-E MS	Matrix Spike	71	66 S1-
880-11287-A-38-F MSD	Matrix Spike Duplicate	84	77
890-1945-1	SS02	94	96

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO2	OTPH2
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
LCS 880-19555/2-A	Lab Control Sample	108	123
LCSD 880-19555/3-A	Lab Control Sample Dup	102	118
MB 880-19555/1-A	Method Blank	82	91

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: Ross Draw 25 NM Battery

Job ID: 890-1945-1
SDG: 31403236.022.0129task19.02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-19708/5-A
Matrix: Solid
Analysis Batch: 19796

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19708

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:00	02/19/22 07:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:00	02/19/22 07:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:00	02/19/22 07:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/18/22 08:00	02/19/22 07:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:00	02/19/22 07:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/18/22 08:00	02/19/22 07:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*02/18/22 08:00*	*02/19/22 07:56*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*02/18/22 08:00*	*02/19/22 07:56*	*1*

Lab Sample ID: MB 880-19793/5-A
Matrix: Solid
Analysis Batch: 19796

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19793

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/18/22 09:11	02/19/22 22:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/18/22 09:11	02/19/22 22:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/18/22 09:11	02/19/22 22:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/18/22 09:11	02/19/22 22:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/18/22 09:11	02/19/22 22:03	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/18/22 09:11	02/19/22 22:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*02/18/22 09:11*	*02/19/22 22:03*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*02/18/22 09:11*	*02/19/22 22:03*	*1*

Lab Sample ID: LCS 880-19793/1-A
Matrix: Solid
Analysis Batch: 19796

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19793

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.07587		mg/Kg		76	70 - 130		
Toluene			0.100	0.07526		mg/Kg		75	70 - 130		
Ethylbenzene			0.100	0.07693		mg/Kg		77	70 - 130		
m-Xylene & p-Xylene			0.200	0.1567		mg/Kg		78	70 - 130		
o-Xylene			0.100	0.07923		mg/Kg		79	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: LCSD 880-19793/2-A
Matrix: Solid
Analysis Batch: 19796

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 19793

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09073		mg/Kg		91	70 - 130	18	35

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QC Sample Results

Client: WSP USA Inc. Job ID: 890-1945-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129task19.02

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

Lab Sample ID: LCSD 880-19793/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19796 **Prep Batch: 19793**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.09648		mg/Kg		96	70 - 130	25	35
Ethylbenzene			0.100	0.08867		mg/Kg		89	70 - 130	14	35
m-Xylene & p-Xylene			0.200	0.1910		mg/Kg		96	70 - 130	20	35
o-Xylene			0.100	0.1058		mg/Kg		106	70 - 130	29	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*145*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: 880-11299-A-1-H MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19796 **Prep Batch: 19793**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.0996	0.08199		mg/Kg		82	70 - 130
Toluene	<0.00200	U F1	0.0996	0.07571		mg/Kg		76	70 - 130
Ethylbenzene	<0.00200	U F1	0.0996	0.06193	F1	mg/Kg		62	70 - 130
m-Xylene & p-Xylene	<0.00399	U F1	0.199	0.1174	F1	mg/Kg		59	70 - 130
o-Xylene	<0.00200	U F1	0.0996	0.06428	F1	mg/Kg		65	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*144*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*

Lab Sample ID: 880-11299-A-1-I MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19796 **Prep Batch: 19793**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.07496		mg/Kg		75	70 - 130	9	35
Toluene	<0.00200	U F1	0.100	0.06880	F1	mg/Kg		69	70 - 130	10	35
Ethylbenzene	<0.00200	U F1	0.100	0.05698	F1	mg/Kg		57	70 - 130	8	35
m-Xylene & p-Xylene	<0.00399	U F1	0.200	0.1075	F1	mg/Kg		54	70 - 130	9	35
o-Xylene	<0.00200	U F1	0.100	0.06171	F1	mg/Kg		62	70 - 130	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*139*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-19555/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19569 **Prep Batch: 19555**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 11:41	1

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1945-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129task19.02

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

Lab Sample ID: MB 880-19555/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19569 **Prep Batch: 19555**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 11:41	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*02/16/22 08:38*	*02/16/22 11:41*	*1*
o-Terphenyl	*91*		*70 - 130*	*02/16/22 08:38*	*02/16/22 11:41*	*1*

Lab Sample ID: LCS 880-19555/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19569 **Prep Batch: 19555**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1005		mg/Kg		100	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1044		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*123*		*70 - 130*

Lab Sample ID: LCSD 880-19555/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19569 **Prep Batch: 19555**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	975.8		mg/Kg		98	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	1013		mg/Kg		101	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*102*		*70 - 130*
o-Terphenyl	*118*		*70 - 130*

Lab Sample ID: 880-11287-A-38-E MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19569 **Prep Batch: 19555**

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 F2	1000	933.5		mg/Kg		91	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U F1	1000	1195		mg/Kg		120	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*71*		*70 - 130*
o-Terphenyl	*66*	*S1-*	*70 - 130*

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1945-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129task19.02

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

Lab Sample ID: 880-11287-A-38-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19569 — **Prep Batch: 19555**

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 F2	998	1256	F2	mg/Kg		123	70 - 130	29	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	998	1394	F1	mg/Kg		140	70 - 130	15	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*84*		*70 - 130*
o-Terphenyl	*77*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-19776/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19882

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/20/22 17:28	1

Lab Sample ID: LCS 880-19776/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19882

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	256.5		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-19776/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19882

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	259.0		mg/Kg		104	90 - 110	1	20

Lab Sample ID: 890-1938-A-6-M MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19882

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	89.9		250	327.9		mg/Kg		95	90 - 110		

Lab Sample ID: 890-1938-A-6-N MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19882

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	89.9		250	340.5		mg/Kg		100	90 - 110	4	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1945-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129task19.02

GC VOA

Prep Batch: 19708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-19708/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 19793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1945-1	SS02	Total/NA	Solid	5035	
MB 880-19793/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-19793/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-19793/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-11299-A-1-H MS	Matrix Spike	Total/NA	Solid	5035	
880-11299-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 19796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1945-1	SS02	Total/NA	Solid	8021B	19793
MB 880-19708/5-A	Method Blank	Total/NA	Solid	8021B	19708
MB 880-19793/5-A	Method Blank	Total/NA	Solid	8021B	19793
LCS 880-19793/1-A	Lab Control Sample	Total/NA	Solid	8021B	19793
LCSD 880-19793/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	19793
880-11299-A-1-H MS	Matrix Spike	Total/NA	Solid	8021B	19793
880-11299-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	19793

Analysis Batch: 20046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1945-1	SS02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 19555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1945-1	SS02	Total/NA	Solid	8015NM Prep	
MB 880-19555/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-19555/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-19555/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-11287-A-38-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-11287-A-38-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 19569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1945-1	SS02	Total/NA	Solid	8015B NM	19555
MB 880-19555/1-A	Method Blank	Total/NA	Solid	8015B NM	19555
LCS 880-19555/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	19555
LCSD 880-19555/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	19555
880-11287-A-38-E MS	Matrix Spike	Total/NA	Solid	8015B NM	19555
880-11287-A-38-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	19555

Analysis Batch: 19702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1945-1	SS02	Total/NA	Solid	8015 NM	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1945-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129task19.02

HPLC/IC

Leach Batch: 19776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1945-1	SS02	Soluble	Solid	DI Leach	
MB 880-19776/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-19776/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-19776/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1938-A-6-M MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1938-A-6-N MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 19882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1945-1	SS02	Soluble	Solid	300.0	19776
MB 880-19776/1-A	Method Blank	Soluble	Solid	300.0	19776
LCS 880-19776/2-A	Lab Control Sample	Soluble	Solid	300.0	19776
LCSD 880-19776/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	19776
890-1938-A-6-M MS	Matrix Spike	Soluble	Solid	300.0	19776
890-1938-A-6-N MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	19776

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Ross Draw 25 NM Battery

Job ID: 890-1945-1
SDG: 31403236.022.0129task19.02

Client Sample ID: SS02

Date Collected: 02/14/22 12:02
Date Received: 02/15/22 09:36

Lab Sample ID: 890-1945-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19793	02/18/22 09:11	KL	XEN MID
Total/NA	Analysis	8021B		1	19796	02/19/22 23:53	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	20046	02/22/22 12:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19702	02/17/22 13:29	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19555	02/16/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19569	02/16/22 20:18	AJ	XEN MID
Soluble	Leach	DI Leach			19776	02/17/22 21:54	CH	XEN MID
Soluble	Analysis	300.0		1	19882	02/20/22 20:01	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-1945-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129task19.02

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	T104704400-21-22	06-30-22

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: WSP USA Inc. Job ID: 890-1945-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129task19.02

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

Protocol References:

ASTM = ASTM International

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: Ross Draw 25 NM Battery

Job ID: 890-1945-1
SDG: 31403236.022.0129task19.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1945-1	SS02	Solid	02/14/22 12:02	02/15/22 09:36	0.5

Chain of Custody

Work Order No: _____

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

www.xenco.com Page 1 of 1

Project Manager:	Kalei Jennings	Bill to: (if different)	Amy Ruth
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, Texas 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432 704 5178	Email:	amy.ruth@exxonmobil.com,aimee.cole@wsp.com

Work Order Comments

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

Project Name:	Ross Draw 25 NM Battery	Turn Around	
Project Number:	31403236.022.0129 Task 19.02	Routine	☑
P.O. Number:	NAPP2201444794	Rush:	
Sampler's Name:	Mercy Rotich.	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	0.6/0.4	Thermometer ID	TWM-007
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Work Order Notes

CC: 1056301001

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
SS02	S	02/14/22	12:02	0.5'	1	X	X	X	Discrete

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 SiO2 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 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. 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 Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to 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		2.15.22 0925	2		
3			4		
5			6		

Revised Date 051418 Rev 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1945-1
SDG Number: 31403236.022.0129task19.02

Login Number: 1945
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1945-1
SDG Number: 31403236.022.0129task19.02

Login Number: 1945
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 02/16/22 12:10 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

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

Laboratory Job ID: 890-1946-1
Laboratory SDG: 31403236.022.0129.task19.02
Client Project/Site: Ross Draw 25 NM Battery

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Kalei Jennings

JKramer

Authorized for release by:
2/22/2022 3:48:14 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

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

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

Client: WSP USA Inc.
Project/Site: Ross Draw 25 NM Battery

Laboratory Job ID: 890-1946-1
SDG: 31403236.022.0129.task19.02

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1946-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129.task19.02

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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.

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: WSP USA Inc. Job ID: 890-1946-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129.task19.02

Job ID: 890-1946-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-1946-1

Receipt
The sample was received on 2/15/2022 9:25 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 0.4°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-19710 and analytical batch 880-19783 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-19555 and analytical batch 880-19569 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-11287-A-38-E MS). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: WSP USA Inc. Job ID: 890-1946-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129.task19.02

Client Sample ID: SS01 **Lab Sample ID: 890-1946-1**
Date Collected: 02/14/22 11:58 **Matrix: Solid**
Date Received: 02/15/22 09:25
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U F2 F1	0.00199		mg/Kg		02/18/22 08:30	02/19/22 12:24	1
Toluene	<0.00199	U F2 F1	0.00199		mg/Kg		02/18/22 08:30	02/19/22 12:24	1
Ethylbenzene	<0.00199	U F2 F1	0.00199		mg/Kg		02/18/22 08:30	02/19/22 12:24	1
m-Xylene & p-Xylene	<0.00398	U F2 F1	0.00398		mg/Kg		02/18/22 08:30	02/19/22 12:24	1
o-Xylene	<0.00199	U F2 F1	0.00199		mg/Kg		02/18/22 08:30	02/19/22 12:24	1
Xylenes, Total	<0.00398	U F2 F1	0.00398		mg/Kg		02/18/22 08:30	02/19/22 12:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*02/18/22 08:30*	*02/19/22 12:24*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*02/18/22 08:30*	*02/19/22 12:24*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/21/22 19:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/17/22 13:29	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 20:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 20:38	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 20:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*02/16/22 08:38*	*02/16/22 20:38*	*1*
o-Terphenyl	*101*		*70 - 130*	*02/16/22 08:38*	*02/16/22 20:38*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10400**		101		mg/Kg			02/20/22 20:08	20

Surrogate Summary

Client: WSP USA Inc. Job ID: 890-1946-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129.task19.02

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)
890-1946-1	SS01	128	103
890-1946-1 MS	SS01	120	109
890-1946-1 MSD	SS01	138 S1+	120
LCS 880-19710/1-A	Lab Control Sample	113	95
LCSD 880-19710/2-A	Lab Control Sample Dup	113	90
MB 880-19707/5-A	Method Blank	119	98
MB 880-19710/5-A	Method Blank	136 S1+	106

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)
880-11287-A-38-E MS	Matrix Spike	71	66 S1-
880-11287-A-38-F MSD	Matrix Spike Duplicate	84	77
890-1946-1	SS01	98	101

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO2	OTPH2
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
LCS 880-19555/2-A	Lab Control Sample	108	123
LCSD 880-19555/3-A	Lab Control Sample Dup	102	118
MB 880-19555/1-A	Method Blank	82	91

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1946-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129.task19.02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-19707/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19783 — **Prep Batch: 19707**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:00	02/19/22 00:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:00	02/19/22 00:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:00	02/19/22 00:17	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/18/22 08:00	02/19/22 00:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:00	02/19/22 00:17	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/18/22 08:00	02/19/22 00:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*02/18/22 08:00*	*02/19/22 00:17*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*02/18/22 08:00*	*02/19/22 00:17*	*1*

Lab Sample ID: MB 880-19710/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19783 — **Prep Batch: 19710**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:30	02/19/22 11:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:30	02/19/22 11:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:30	02/19/22 11:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/18/22 08:30	02/19/22 11:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/18/22 08:30	02/19/22 11:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/18/22 08:30	02/19/22 11:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*136*	*S1+*	*70 - 130*	*02/18/22 08:30*	*02/19/22 11:55*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*02/18/22 08:30*	*02/19/22 11:55*	*1*

Lab Sample ID: LCS 880-19710/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19783 — **Prep Batch: 19710**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08299		mg/Kg		83	70 - 130		
Toluene			0.100	0.09093		mg/Kg		91	70 - 130		
Ethylbenzene			0.100	0.08868		mg/Kg		89	70 - 130		
m-Xylene & p-Xylene			0.200	0.1786		mg/Kg		89	70 - 130		
o-Xylene			0.100	0.09383		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-19710/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19783 — **Prep Batch: 19710**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07991		mg/Kg		80	70 - 130	4	35

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1946-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129.task19.02

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

Lab Sample ID: LCSD 880-19710/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19783 **Prep Batch: 19710**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.09096		mg/Kg		91	70 - 130	0	35
Ethylbenzene			0.100	0.09346		mg/Kg		93	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1837		mg/Kg		92	70 - 130	3	35
o-Xylene			0.100	0.09380		mg/Kg		94	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: 890-1946-1 MS **Client Sample ID: SS01**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19783 **Prep Batch: 19710**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00199	U F2 F1	0.100	0.01806	F1	mg/Kg		18	70 - 130
Toluene	<0.00199	U F2 F1	0.100	0.01388	F1	mg/Kg		14	70 - 130
Ethylbenzene	<0.00199	U F2 F1	0.100	0.01685	F1	mg/Kg		17	70 - 130
m-Xylene & p-Xylene	<0.00398	U F2 F1	0.200	0.01635	F1	mg/Kg		8	70 - 130
o-Xylene	<0.00199	U F2 F1	0.100	0.01756	F1	mg/Kg		18	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 890-1946-1 MSD **Client Sample ID: SS01**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19783 **Prep Batch: 19710**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U F2 F1	0.0998	0.07436	F2	mg/Kg		75	70 - 130	122	35
Toluene	<0.00199	U F2 F1	0.0998	0.06677	F2 F1	mg/Kg		67	70 - 130	131	35
Ethylbenzene	<0.00199	U F2 F1	0.0998	0.06714	F2 F1	mg/Kg		67	70 - 130	120	35
m-Xylene & p-Xylene	<0.00398	U F2 F1	0.200	0.1285	F2 F1	mg/Kg		64	70 - 130	155	35
o-Xylene	<0.00199	U F2 F1	0.0998	0.06604	F2 F1	mg/Kg		66	70 - 130	116	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*138*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*120*		*70 - 130*

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

Lab Sample ID: MB 880-19555/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19569 **Prep Batch: 19555**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 11:41	1

QC Sample Results

Client: WSP USA Inc.
Project/Site: Ross Draw 25 NM Battery

Job ID: 890-1946-1
SDG: 31403236.022.0129.task19.02

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

Lab Sample ID: MB 880-19555/1-A
Matrix: Solid
Analysis Batch: 19569

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19555

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 11:41	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/16/22 08:38	02/16/22 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*02/16/22 08:38*	*02/16/22 11:41*	*1*
o-Terphenyl	*91*		*70 - 130*	*02/16/22 08:38*	*02/16/22 11:41*	*1*

Lab Sample ID: LCS 880-19555/2-A
Matrix: Solid
Analysis Batch: 19569

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19555

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1005		mg/Kg		100	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1044		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*123*		*70 - 130*

Lab Sample ID: LCSD 880-19555/3-A
Matrix: Solid
Analysis Batch: 19569

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 19555

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	975.8		mg/Kg		98	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	1013		mg/Kg		101	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*102*		*70 - 130*
o-Terphenyl	*118*		*70 - 130*

Lab Sample ID: 880-11287-A-38-E MS
Matrix: Solid
Analysis Batch: 19569

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 19555

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 F2	1000	933.5		mg/Kg		91	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U F1	1000	1195		mg/Kg		120	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*71*		*70 - 130*
o-Terphenyl	*66*	*S1-*	*70 - 130*

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1946-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129.task19.02

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

Lab Sample ID: 880-11287-A-38-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19569 — **Prep Batch: 19555**

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 F2	998	1256	F2	mg/Kg		123	70 - 130	29	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	998	1394	F1	mg/Kg		140	70 - 130	15	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*84*		*70 - 130*
o-Terphenyl	*77*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-19776/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19882

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/20/22 17:28	1

Lab Sample ID: LCS 880-19776/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19882

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	256.5		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-19776/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19882

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	259.0		mg/Kg		104	90 - 110	1	20

Lab Sample ID: 890-1938-A-6-M MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19882

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	89.9		250	327.9		mg/Kg		95	90 - 110		

Lab Sample ID: 890-1938-A-6-N MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 19882

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	89.9		250	340.5		mg/Kg		100	90 - 110	4	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1946-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129.task19.02

GC VOA

Prep Batch: 19707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-19707/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 19710

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1946-1	SS01	Total/NA	Solid	5035	
MB 880-19710/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-19710/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-19710/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1946-1 MS	SS01	Total/NA	Solid	5035	
890-1946-1 MSD	SS01	Total/NA	Solid	5035	

Analysis Batch: 19783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1946-1	SS01	Total/NA	Solid	8021B	19710
MB 880-19707/5-A	Method Blank	Total/NA	Solid	8021B	19707
MB 880-19710/5-A	Method Blank	Total/NA	Solid	8021B	19710
LCS 880-19710/1-A	Lab Control Sample	Total/NA	Solid	8021B	19710
LCSD 880-19710/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	19710
890-1946-1 MS	SS01	Total/NA	Solid	8021B	19710
890-1946-1 MSD	SS01	Total/NA	Solid	8021B	19710

Analysis Batch: 20002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1946-1	SS01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 19555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1946-1	SS01	Total/NA	Solid	8015NM Prep	
MB 880-19555/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-19555/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-19555/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-11287-A-38-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-11287-A-38-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 19569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1946-1	SS01	Total/NA	Solid	8015B NM	19555
MB 880-19555/1-A	Method Blank	Total/NA	Solid	8015B NM	19555
LCS 880-19555/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	19555
LCSD 880-19555/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	19555
880-11287-A-38-E MS	Matrix Spike	Total/NA	Solid	8015B NM	19555
880-11287-A-38-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	19555

Analysis Batch: 19703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1946-1	SS01	Total/NA	Solid	8015 NM	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1946-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129.task19.02

HPLC/IC

Leach Batch: 19776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1946-1	SS01	Soluble	Solid	DI Leach	
MB 880-19776/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-19776/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-19776/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1938-A-6-M MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1938-A-6-N MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 19882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1946-1	SS01	Soluble	Solid	300.0	19776
MB 880-19776/1-A	Method Blank	Soluble	Solid	300.0	19776
LCS 880-19776/2-A	Lab Control Sample	Soluble	Solid	300.0	19776
LCSD 880-19776/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	19776
890-1938-A-6-M MS	Matrix Spike	Soluble	Solid	300.0	19776
890-1938-A-6-N MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	19776

Lab Chronicle

Client: WSP USA Inc.
Job ID: 890-1946-1
Project/Site: Ross Draw 25 NM Battery
SDG: 31403236.022.0129.task19.02

Client Sample ID: SS01
Lab Sample ID: 890-1946-1

Date Collected: 02/14/22 11:58
Matrix: Solid

Date Received: 02/15/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19710	02/18/22 08:30	KL	XEN MID
Total/NA	Analysis	8021B		1	19783	02/19/22 12:24	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	20002	02/21/22 19:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19703	02/17/22 13:29	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19555	02/16/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19569	02/16/22 20:38	AJ	XEN MID
Soluble	Leach	DI Leach			19776	02/17/22 21:54	CH	XEN MID
Soluble	Analysis	300.0		20	19882	02/20/22 20:08	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-1946-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129.task19.02

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	T104704400-21-22	06-30-22

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: WSP USA Inc. Job ID: 890-1946-1
Project/Site: Ross Draw 25 NM Battery SDG: 31403236.022.0129.task19.02

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

Protocol References:

ASTM = ASTM International

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: Ross Draw 25 NM Battery

Job ID: 890-1946-1
SDG: 31403236.022.0129.task19.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1946-1	SS01	Solid	02/14/22 11:58	02/15/22 09:25	0.5

Chain of Custody

Work Order No: _____

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

www.xenco.com Page 1 of 1

Project Manager:	Kalei Jennings	Bill to: (if different)	Amy Ruth
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, Texas 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432 704 5178	Email:	amy.ruth@exxonmobil.com,aimee.cole@wsp.com

Work Order Comments

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

Project Name:	Ross Draw 25 NM Battery	Turn Around	
Project Number:	31403236.022.0129 Task 19.02	Routine	✓
P.O. Number:	NAPP2201444794	Rush:	
Sampler's Name:	Mercy Rotich.	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	2.6 / 0.4	Thermometer ID	TRM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SS01	S	02/14/22	11:58	0.5'	1	X	X	X

Work Order Notes

CC: 1056301001

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

Discrete

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 SiO2 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 **1631 / 245.1 / 7470 / 7471** : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		2.15.220925	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018 1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1946-1
SDG Number: 31403236.022.0129.task19.02

Login Number: 1946
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1946-1
SDG Number: 31403236.022.0129.task19.02

Login Number: 1946
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 02/16/22 12:10 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

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

Laboratory Job ID: 890-2319-1
Laboratory Sample Delivery Group: 03E1558028
Client Project/Site: Ross Draw 25 battery

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
5/26/2022 4:17:51 PM

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

LINKS

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

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

Client: Ensolum
Project/Site: Ross Draw 25 battery

Laboratory Job ID: 890-2319-1
SDG: 03E1558028

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-2319-1
Project/Site: Ross Draw 25 battery SDG: 03E1558028

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: Ross Draw 25 battery

Job ID: 890-2319-1
SDG: 03E1558028

Job ID: 890-2319-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2319-1

Receipt
The samples were received on 5/18/2022 4:13 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-25961 and analytical batch 880-25945 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SW02 (890-2319-4). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 25 battery

Job ID: 890-2319-1
SDG: 03E1558028

Client Sample ID: EX01

Lab Sample ID: 890-2319-1
Matrix: Solid
Date Collected: 05/18/22 13:45
Date Received: 05/18/22 16:13
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/20/22 15:30	05/21/22 14:38	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/20/22 15:30	05/21/22 14:38	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/20/22 15:30	05/21/22 14:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/20/22 15:30	05/21/22 14:38	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/20/22 15:30	05/21/22 14:38	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/20/22 15:30	05/21/22 14:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*05/20/22 15:30*	*05/21/22 14:38*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/20/22 15:30*	*05/21/22 14:38*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/23/22 11:27	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/23/22 09:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/20/22 09:19	05/21/22 05:24	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/20/22 09:19	05/21/22 05:24	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/20/22 09:19	05/21/22 05:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*05/20/22 09:19*	*05/21/22 05:24*	*1*
o-Terphenyl	*118*		*70 - 130*	*05/20/22 09:19*	*05/21/22 05:24*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**128**		5.00		mg/Kg			05/24/22 16:01	1

Client Sample ID: EX02

Lab Sample ID: 890-2319-2
Matrix: Solid
Date Collected: 05/18/22 14:00
Date Received: 05/18/22 16:13
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/20/22 15:30	05/21/22 15:05	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/20/22 15:30	05/21/22 15:05	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/20/22 15:30	05/21/22 15:05	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/20/22 15:30	05/21/22 15:05	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/20/22 15:30	05/21/22 15:05	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/20/22 15:30	05/21/22 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*05/20/22 15:30*	*05/21/22 15:05*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 25 battery

Job ID: 890-2319-1
SDG: 03E1558028

Client Sample ID: EX02

Lab Sample ID: 890-2319-2
Matrix: Solid
Date Collected: 05/18/22 14:00
Date Received: 05/18/22 16:13
Sample Depth: 2

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/20/22 15:30*	*05/21/22 15:05*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			05/23/22 11:27	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/23/22 09:09	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/20/22 09:19	05/21/22 05:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/20/22 09:19	05/21/22 05:45	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/20/22 09:19	05/21/22 05:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*104*		*70 - 130*	*05/20/22 09:19*	*05/21/22 05:45*	*1*
o-Terphenyl	*115*		*70 - 130*	*05/20/22 09:19*	*05/21/22 05:45*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**255**		24.8	mg/Kg			05/24/22 16:29	5

Client Sample ID: SW01

Lab Sample ID: 890-2319-3
Matrix: Solid
Date Collected: 05/18/22 14:15
Date Received: 05/18/22 16:13
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/20/22 15:30	05/21/22 15:32	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/20/22 15:30	05/21/22 15:32	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/20/22 15:30	05/21/22 15:32	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/20/22 15:30	05/21/22 15:32	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/20/22 15:30	05/21/22 15:32	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/20/22 15:30	05/21/22 15:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*	*05/20/22 15:30*	*05/21/22 15:32*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/20/22 15:30*	*05/21/22 15:32*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			05/23/22 11:27	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			05/23/22 09:09	1

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Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 25 battery

Job ID: 890-2319-1
SDG: 03E1558028

Client Sample ID: SW01

Lab Sample ID: 890-2319-3
Matrix: Solid
Date Collected: 05/18/22 14:15
Date Received: 05/18/22 16:13
Sample Depth: 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/20/22 09:19	05/21/22 06:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/20/22 09:19	05/21/22 06:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/20/22 09:19	05/21/22 06:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*05/20/22 09:19*	*05/21/22 06:04*	*1*
o-Terphenyl	*114*		*70 - 130*	*05/20/22 09:19*	*05/21/22 06:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**118**		5.04		mg/Kg			05/26/22 13:04	1

Client Sample ID: SW02

Lab Sample ID: 890-2319-4
Matrix: Solid
Date Collected: 05/18/22 14:20
Date Received: 05/18/22 16:13
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/20/22 15:30	05/21/22 16:00	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/20/22 15:30	05/21/22 16:00	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/20/22 15:30	05/21/22 16:00	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/20/22 15:30	05/21/22 16:00	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/20/22 15:30	05/21/22 16:00	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/20/22 15:30	05/21/22 16:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*05/20/22 15:30*	*05/21/22 16:00*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/20/22 15:30*	*05/21/22 16:00*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/23/22 11:27	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/23/22 09:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/20/22 09:19	05/21/22 06:24	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/20/22 09:19	05/21/22 06:24	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/20/22 09:19	05/21/22 06:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*05/20/22 09:19*	*05/21/22 06:24*	*1*
o-Terphenyl	*133*	*S1+*	*70 - 130*	*05/20/22 09:19*	*05/21/22 06:24*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Ross Draw 25 battery

Job ID: 890-2319-1
SDG: 03E1558028

Client Sample ID: SW02

Date Collected: 05/18/22 14:20
Date Received: 05/18/22 16:13
Sample Depth: 2

Lab Sample ID: 890-2319-4

Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	57.5		4.97		mg/Kg			05/26/22 13:13	1

Surrogate Summary

Client: Ensolum
Project/Site: Ross Draw 25 battery

Job ID: 890-2319-1
SDG: 03E1558028

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)
890-2317-A-5-C MS	Matrix Spike	124	92
890-2317-A-5-D MSD	Matrix Spike Duplicate	121	82
890-2319-1	EX01	120	96
890-2319-2	EX02	124	95
890-2319-3	SW01	129	97
890-2319-4	SW02	126	96
LCS 880-25961/1-A	Lab Control Sample	116	103
LCSD 880-25961/2-A	Lab Control Sample Dup	115	99
MB 880-25948/5-A	Method Blank	86	88
MB 880-25961/5-A	Method Blank	89	86

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)
880-14972-A-21-F MS	Matrix Spike	105	98
880-14972-A-21-G MSD	Matrix Spike Duplicate	101	97
890-2319-1	EX01	107	118
890-2319-2	EX02	104	115
890-2319-3	SW01	104	114
890-2319-4	SW02	120	133 S1+
LCS 880-25960/2-A	Lab Control Sample	89	89
LCSD 880-25960/3-A	Lab Control Sample Dup	116	116
MB 880-25960/1-A	Method Blank	114	126

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 25 battery

Job ID: 890-2319-1
SDG: 03E1558028

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-25948/5-A
Matrix: Solid
Analysis Batch: 25945

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25948

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000400	U	0.000400		mg/Kg		05/20/22 09:18	05/20/22 17:07	1
Toluene	<0.000400	U	0.000400		mg/Kg		05/20/22 09:18	05/20/22 17:07	1
Ethylbenzene	<0.000400	U	0.000400		mg/Kg		05/20/22 09:18	05/20/22 17:07	1
m-Xylene & p-Xylene	<0.000800	U	0.000800		mg/Kg		05/20/22 09:18	05/20/22 17:07	1
o-Xylene	<0.000400	U	0.000400		mg/Kg		05/20/22 09:18	05/20/22 17:07	1
Xylenes, Total	<0.000800	U	0.000800		mg/Kg		05/20/22 09:18	05/20/22 17:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*05/20/22 09:18*	*05/20/22 17:07*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*05/20/22 09:18*	*05/20/22 17:07*	*1*

Lab Sample ID: MB 880-25961/5-A
Matrix: Solid
Analysis Batch: 25945

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25961

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/20/22 09:25	05/21/22 06:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/20/22 09:25	05/21/22 06:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/20/22 09:25	05/21/22 06:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/20/22 09:25	05/21/22 06:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/20/22 09:25	05/21/22 06:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/20/22 09:25	05/21/22 06:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*05/20/22 09:25*	*05/21/22 06:40*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*05/20/22 09:25*	*05/21/22 06:40*	*1*

Lab Sample ID: LCS 880-25961/1-A
Matrix: Solid
Analysis Batch: 25945

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25961

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1251		mg/Kg		125	70 - 130		
Toluene			0.100	0.1152		mg/Kg		115	70 - 130		
Ethylbenzene			0.100	0.1121		mg/Kg		112	70 - 130		
m-Xylene & p-Xylene			0.200	0.2264		mg/Kg		113	70 - 130		
o-Xylene			0.100	0.1126		mg/Kg		113	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-25961/2-A
Matrix: Solid
Analysis Batch: 25945

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25961

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1109		mg/Kg		111	70 - 130	12	35

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 25 battery

Job ID: 890-2319-1
SDG: 03E1558028

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

Lab Sample ID: LCSD 880-25961/2-A
Matrix: Solid
Analysis Batch: 25945

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25961

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09968		mg/Kg		100	70 - 130	14	35
Ethylbenzene			0.100	0.1006		mg/Kg		101	70 - 130	11	35
m-Xylene & p-Xylene			0.200	0.2035		mg/Kg		102	70 - 130	11	35
o-Xylene			0.100	0.1018		mg/Kg		102	70 - 130	10	35

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

Lab Sample ID: 890-2317-A-5-C MS
Matrix: Solid
Analysis Batch: 25945

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 25961

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U F2 F1	0.100	0.02880	F1	mg/Kg		29	70 - 130
Toluene	<0.00199	U F2 F1	0.100	0.03226	F1	mg/Kg		32	70 - 130
Ethylbenzene	<0.00199	U F2 F1	0.100	0.03096	F1	mg/Kg		31	70 - 130
m-Xylene & p-Xylene	<0.00398	U F2 F1	0.200	0.06426	F1	mg/Kg		32	70 - 130
o-Xylene	<0.00199	U F2 F1	0.100	0.03583	F1	mg/Kg		36	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 890-2317-A-5-D MSD
Matrix: Solid
Analysis Batch: 25945

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 25961

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F2 F1	0.101	0.09361	F2	mg/Kg		93	70 - 130	106	35
Toluene	<0.00199	U F2 F1	0.101	0.09356	F2	mg/Kg		93	70 - 130	97	35
Ethylbenzene	<0.00199	U F2 F1	0.101	0.08576	F2	mg/Kg		85	70 - 130	94	35
m-Xylene & p-Xylene	<0.00398	U F2 F1	0.202	0.1698	F2	mg/Kg		84	70 - 130	90	35
o-Xylene	<0.00199	U F2 F1	0.101	0.08523	F2	mg/Kg		84	70 - 130	82	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*

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

Lab Sample ID: MB 880-25960/1-A
Matrix: Solid
Analysis Batch: 25938

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25960

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		05/20/22 09:19	05/20/22 22:11	1

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 25 battery

Job ID: 890-2319-1
SDG: 03E1558028

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

Lab Sample ID: MB 880-25960/1-A
Matrix: Solid
Analysis Batch: 25938

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25960

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		05/20/22 09:19	05/20/22 22:11	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/20/22 09:19	05/20/22 22:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*05/20/22 09:19*	*05/20/22 22:11*	*1*
o-Terphenyl	*126*		*70 - 130*	*05/20/22 09:19*	*05/20/22 22:11*	*1*

Lab Sample ID: LCS 880-25960/2-A
Matrix: Solid
Analysis Batch: 25938

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25960

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1081		mg/Kg		108	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	857.0		mg/Kg		86	70 - 130		

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

Lab Sample ID: LCSD 880-25960/3-A
Matrix: Solid
Analysis Batch: 25938

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25960

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1191		mg/Kg		119	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	1019		mg/Kg		102	70 - 130	17	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*116*		*70 - 130*
o-Terphenyl	*116*		*70 - 130*

Lab Sample ID: 880-14972-A-21-F MS
Matrix: Solid
Analysis Batch: 25938

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 25960

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	1000	1099		mg/Kg		107	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	780.4		mg/Kg		78	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 25 battery

Job ID: 890-2319-1
SDG: 03E1558028

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

Lab Sample ID: 880-14972-A-21-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 25938 — **Prep Batch: 25960**

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	999	948.0		mg/Kg		92	70 - 130	15	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	759.9		mg/Kg		76	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*101*		*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-25907/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 26071

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/24/22 13:24	1

Lab Sample ID: LCS 880-25907/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 26071

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	256.5		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-25907/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 26071

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	250.1		mg/Kg		100	90 - 110	3	20

Lab Sample ID: 890-2319-1 MS — **Client Sample ID: EX01**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 26071

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	128		250	384.6		mg/Kg		103	90 - 110		

Lab Sample ID: 890-2319-1 MSD — **Client Sample ID: EX01**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 26071

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	128		250	391.2		mg/Kg		105	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 25 battery

Job ID: 890-2319-1
SDG: 03E1558028

GC VOA

Analysis Batch: 25945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2319-1	EX01	Total/NA	Solid	8021B	25961
890-2319-2	EX02	Total/NA	Solid	8021B	25961
890-2319-3	SW01	Total/NA	Solid	8021B	25961
890-2319-4	SW02	Total/NA	Solid	8021B	25961
MB 880-25948/5-A	Method Blank	Total/NA	Solid	8021B	25948
MB 880-25961/5-A	Method Blank	Total/NA	Solid	8021B	25961
LCS 880-25961/1-A	Lab Control Sample	Total/NA	Solid	8021B	25961
LCSD 880-25961/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25961
890-2317-A-5-C MS	Matrix Spike	Total/NA	Solid	8021B	25961
890-2317-A-5-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	25961

Prep Batch: 25948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-25948/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 25961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2319-1	EX01	Total/NA	Solid	5035	
890-2319-2	EX02	Total/NA	Solid	5035	
890-2319-3	SW01	Total/NA	Solid	5035	
890-2319-4	SW02	Total/NA	Solid	5035	
MB 880-25961/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25961/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25961/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2317-A-5-C MS	Matrix Spike	Total/NA	Solid	5035	
890-2317-A-5-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 26096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2319-1	EX01	Total/NA	Solid	Total BTEX	
890-2319-2	EX02	Total/NA	Solid	Total BTEX	
890-2319-3	SW01	Total/NA	Solid	Total BTEX	
890-2319-4	SW02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 25938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2319-1	EX01	Total/NA	Solid	8015B NM	25960
890-2319-2	EX02	Total/NA	Solid	8015B NM	25960
890-2319-3	SW01	Total/NA	Solid	8015B NM	25960
890-2319-4	SW02	Total/NA	Solid	8015B NM	25960
MB 880-25960/1-A	Method Blank	Total/NA	Solid	8015B NM	25960
LCS 880-25960/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	25960
LCSD 880-25960/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	25960
880-14972-A-21-F MS	Matrix Spike	Total/NA	Solid	8015B NM	25960
880-14972-A-21-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	25960

Prep Batch: 25960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2319-1	EX01	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 25 battery

Job ID: 890-2319-1
SDG: 03E1558028

GC Semi VOA (Continued)

Prep Batch: 25960 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2319-2	EX02	Total/NA	Solid	8015NM Prep	
890-2319-3	SW01	Total/NA	Solid	8015NM Prep	
890-2319-4	SW02	Total/NA	Solid	8015NM Prep	
MB 880-25960/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-25960/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-25960/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-14972-A-21-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-14972-A-21-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 26035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2319-1	EX01	Total/NA	Solid	8015 NM	
890-2319-2	EX02	Total/NA	Solid	8015 NM	
890-2319-3	SW01	Total/NA	Solid	8015 NM	
890-2319-4	SW02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 25907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2319-1	EX01	Soluble	Solid	DI Leach	
890-2319-2	EX02	Soluble	Solid	DI Leach	
890-2319-3	SW01	Soluble	Solid	DI Leach	
890-2319-4	SW02	Soluble	Solid	DI Leach	
MB 880-25907/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-25907/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-25907/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2319-1 MS	EX01	Soluble	Solid	DI Leach	
890-2319-1 MSD	EX01	Soluble	Solid	DI Leach	

Analysis Batch: 26071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2319-1	EX01	Soluble	Solid	300.0	25907
890-2319-2	EX02	Soluble	Solid	300.0	25907
890-2319-3	SW01	Soluble	Solid	300.0	25907
890-2319-4	SW02	Soluble	Solid	300.0	25907
MB 880-25907/1-A	Method Blank	Soluble	Solid	300.0	25907
LCS 880-25907/2-A	Lab Control Sample	Soluble	Solid	300.0	25907
LCSD 880-25907/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	25907
890-2319-1 MS	EX01	Soluble	Solid	300.0	25907
890-2319-1 MSD	EX01	Soluble	Solid	300.0	25907

Lab Chronicle

Client: Ensolum
Project/Site: Ross Draw 25 battery

Job ID: 890-2319-1
SDG: 03E1558028

Client Sample ID: EX01

Date Collected: 05/18/22 13:45
Date Received: 05/18/22 16:13

Lab Sample ID: 890-2319-1
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	25961	05/20/22 15:30	MR	XEN MID
Total/NA	Analysis	8021B		1			25945	05/21/22 14:38	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			26096	05/23/22 11:27	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26035	05/23/22 09:09	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	25960	05/20/22 09:19	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25938	05/21/22 05:24	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	25907	05/20/22 12:45	CH	XEN MID
Soluble	Analysis	300.0		1			26071	05/24/22 16:01	CH	XEN MID

Client Sample ID: EX02

Date Collected: 05/18/22 14:00
Date Received: 05/18/22 16:13

Lab Sample ID: 890-2319-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	25961	05/20/22 15:30	MR	XEN MID
Total/NA	Analysis	8021B		1			25945	05/21/22 15:05	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			26096	05/23/22 11:27	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26035	05/23/22 09:09	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	25960	05/20/22 09:19	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25938	05/21/22 05:45	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	25907	05/20/22 12:45	CH	XEN MID
Soluble	Analysis	300.0		5			26071	05/24/22 16:29	CH	XEN MID

Client Sample ID: SW01

Date Collected: 05/18/22 14:15
Date Received: 05/18/22 16:13

Lab Sample ID: 890-2319-3
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	25961	05/20/22 15:30	MR	XEN MID
Total/NA	Analysis	8021B		1			25945	05/21/22 15:32	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			26096	05/23/22 11:27	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26035	05/23/22 09:09	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25960	05/20/22 09:19	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25938	05/21/22 06:04	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	25907	05/20/22 12:45	CH	XEN MID
Soluble	Analysis	300.0		1			26071	05/26/22 13:04	CH	XEN MID

Client Sample ID: SW02

Date Collected: 05/18/22 14:20
Date Received: 05/18/22 16:13

Lab Sample ID: 890-2319-4
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			5.03 g	5 mL	25961	05/20/22 15:30	MR	XEN MID
Total/NA	Analysis	8021B		1			25945	05/21/22 16:00	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			26096	05/23/22 11:27	SM	XEN MID

Lab Chronicle

Client: Ensolum
Project/Site: Ross Draw 25 battery

Job ID: 890-2319-1
SDG: 03E1558028

Client Sample ID: SW02

Date Collected: 05/18/22 14:20
Date Received: 05/18/22 16:13

Lab Sample ID: 890-2319-4

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			26035	05/23/22 09:09	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25960	05/20/22 09:19	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25938	05/21/22 06:24	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	25907	05/20/22 12:45	CH	XEN MID
Soluble	Analysis	300.0		1			26071	05/26/22 13:13	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Ross Draw 25 battery

Job ID: 890-2319-1
SDG: 03E1558028

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	T104704400-21-22	06-30-22

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: Ross Draw 25 battery

Job ID: 890-2319-1
SDG: 03E1558028

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

Protocol References:

ASTM = ASTM International

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: Ross Draw 25 battery

Job ID: 890-2319-1
SDG: 03E1558028

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2319-1	EX01	Solid	05/18/22 13:45	05/18/22 16:13	2
890-2319-2	EX02	Solid	05/18/22 14:00	05/18/22 16:13	2
890-2319-3	SW01	Solid	05/18/22 14:15	05/18/22 16:13	2
890-2319-4	SW02	Solid	05/18/22 14:20	05/18/22 16:13	2

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Kolei Jennings	Bill to: (if different)	Adrian Baker
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	817-683-2503	Email:	KJennings@ensolum.com

Work Order Comments

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

Project Name:	Ross Draw 25 Battery	Turn Around	
Project Number:	03E1558028	☒Routine ☐Rush	
Project Location:	Eddy County, NM	Due Date:	5 Day
Sampler's Name:	Eric Carroll	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	T-M-nov	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.2	
Total Containers:		Corrected Temperature:	5.0	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chloride	TPH	BTEX
Ex01	S	5.18.22	13:45	2'	C	1		x	x	x
Ex02	S	↓	14:00	2'	C	1		x	x	x
SW01	S		14:15	2'	C	1		x	x	x
SW02	S	↓	14:20	2'	C	1		x	x	x

890-2319 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

Inc. #
NAPP2201444794

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Eric Carroll		6/18/22 4:13	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2319-1
SDG Number: 03E1558028

Login Number: 2319
List Number: 1
Creator: Olivas, Nathaniel

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2319-1
SDG Number: 03E1558028

Login Number: 2319
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/20/22 10:39 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-2717-1
Laboratory Sample Delivery Group: 03E1558028
Client Project/Site: Ross Draw 25

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
8/11/2022 10:43:18 AM

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

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

Client: Ensolum
Project/Site: Ross Draw 25

Laboratory Job ID: 890-2717-1
SDG: 03E1558028

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Ross Draw 25

Job ID: 890-2717-1
SDG: 03E1558028

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD 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: Ross Draw 25

Job ID: 890-2717-1
SDG: 03E1558028

Job ID: 890-2717-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2717-1

Receipt
The sample was received on 8/3/2022 2:47 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 25.6°C

Receipt Exceptions
The following sample was received at the laboratory outside the required temperature criteria: SW03 (890-2717-1). This does not meet regulatory requirements. The client was contacted regarding this issue, and the laboratory was instructed to <CHOOSE_ONE> proceed with/cancel analysis. Sample received out of temp range, client notified and wished to proceed with sampling.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-31570/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-31570 and analytical batch 880-31633 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

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 880-31833 and analytical batch 880-31871 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.MSD misinjected.

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: Ross Draw 25

Job ID: 890-2717-1
SDG: 03E1558028

Client Sample ID: SW03

Date Collected: 08/03/22 10:00
Date Received: 08/03/22 14:47
Sample Depth: 0.2'

Lab Sample ID: 890-2717-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/09/22 14:20	08/10/22 23:30	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/09/22 14:20	08/10/22 23:30	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/09/22 14:20	08/10/22 23:30	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/09/22 14:20	08/10/22 23:30	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/09/22 14:20	08/10/22 23:30	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/09/22 14:20	08/10/22 23:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*08/09/22 14:20*	*08/10/22 23:30*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*08/09/22 14:20*	*08/10/22 23:30*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			08/11/22 10:57	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			08/08/22 11:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0		mg/Kg		08/05/22 10:50	08/06/22 13:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/05/22 10:50	08/06/22 13:26	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/05/22 10:50	08/06/22 13:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*08/05/22 10:50*	*08/06/22 13:26*	*1*
o-Terphenyl	*99*		*70 - 130*	*08/05/22 10:50*	*08/06/22 13:26*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**37.7**	**F1 F2**	4.98		mg/Kg			08/09/22 20:31	1

Surrogate Summary

Client: Ensolum
Project/Site: Ross Draw 25

Job ID: 890-2717-1
SDG: 03E1558028

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2717-1	SW03	112	89
890-2717-1 MS	SW03	104	93
890-2717-1 MSD	SW03	103	94
LCS 880-31852/1-A	Lab Control Sample	104	93
LCSD 880-31852/2-A	Lab Control Sample Dup	117	93
MB 880-31852/5-A	Method Blank	100	87
MB 880-31859/5-A	Method Blank	99	88

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-2712-A-1-C MS	Matrix Spike	77	85
890-2712-A-1-D MSD	Matrix Spike Duplicate	92	101
890-2717-1	SW03	88	99
LCS 880-31570/2-A	Lab Control Sample	135 S1+	133 S1+
LCSD 880-31570/3-A	Lab Control Sample Dup	111	130
MB 880-31570/1-A	Method Blank	91	105

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 25

Job ID: 890-2717-1
SDG: 03E1558028

Method: 8021B - Volatile Organic Compounds (GC)

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

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

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

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

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

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

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

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

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

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

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

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

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

Client Sample ID: SW03
Prep Type: Total/NA
Prep Batch: 31852

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

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 25

Job ID: 890-2717-1
SDG: 03E1558028

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

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

Client Sample ID: SW03
Prep Type: Total/NA
Prep Batch: 31852

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

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

Lab Sample ID: 890-2717-1 MSD
Matrix: Solid
Analysis Batch: 31883

Client Sample ID: SW03
Prep Type: Total/NA
Prep Batch: 31852

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

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

Lab Sample ID: MB 880-31859/5-A
Matrix: Solid
Analysis Batch: 31883

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31859

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

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

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

Lab Sample ID: MB 880-31570/1-A
Matrix: Solid
Analysis Batch: 31633

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31570

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/05/22 10:50	08/06/22 10:56	1

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 25

Job ID: 890-2717-1
SDG: 03E1558028

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

Lab Sample ID: MB 880-31570/1-A
Matrix: Solid
Analysis Batch: 31633

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31570

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/05/22 10:50	08/06/22 10:56	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/05/22 10:50	08/06/22 10:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*08/05/22 10:50*	*08/06/22 10:56*	*1*
o-Terphenyl	*105*		*70 - 130*	*08/05/22 10:50*	*08/06/22 10:56*	*1*

Lab Sample ID: LCS 880-31570/2-A
Matrix: Solid
Analysis Batch: 31633

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31570

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1077		mg/Kg		108	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1004		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*135*	*S1+*	*70 - 130*
o-Terphenyl	*133*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-31570/3-A
Matrix: Solid
Analysis Batch: 31633

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31570

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	860.0	*1	mg/Kg		86	70 - 130	22	20
Diesel Range Organics (Over C10-C28)			1000	967.6		mg/Kg		97	70 - 130	4	20

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

Lab Sample ID: 890-2712-A-1-C MS
Matrix: Solid
Analysis Batch: 31633

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 31570

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	999	994.7		mg/Kg		100	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	709.9		mg/Kg		71	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*77*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 25

Job ID: 890-2717-1
SDG: 03E1558028

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

Lab Sample ID: 890-2712-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 31633 — **Prep Batch: 31570**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	999	840.2		mg/Kg		84	70 - 130	17	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	843.5		mg/Kg		84	70 - 130	17	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*101*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31833/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31871

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			08/09/22 18:22	1

Lab Sample ID: LCS 880-31833/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31871

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	231.7		mg/Kg		93	90 - 110		

Lab Sample ID: LCSD 880-31833/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31871

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	236.1		mg/Kg		94	90 - 110	2	20

Lab Sample ID: 880-17783-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31871

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	53.2	F1	250	601.4	F1	mg/Kg		220	90 - 110		

Lab Sample ID: 880-17783-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 31871

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	53.2	F1	250	593.2	F1	mg/Kg		216	90 - 110	1	20

QC Sample Results

Client: Ensolum
Project/Site: Ross Draw 25

Job ID: 890-2717-1
SDG: 03E1558028

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2717-1 MS
Matrix: Solid
Analysis Batch: 31871

Client Sample ID: SW03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	37.7	F1 F2	498	586.9		mg/Kg		110	90 - 110		

Lab Sample ID: 890-2717-1 MSD
Matrix: Solid
Analysis Batch: 31871

Client Sample ID: SW03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	37.7	F1 F2	498	34.88	F1 F2	mg/Kg		-0.6	90 - 110	178	20

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 25

Job ID: 890-2717-1
SDG: 03E1558028

GC VOA

Prep Batch: 31852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2717-1	SW03	Total/NA	Solid	5035	
MB 880-31852/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31852/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31852/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2717-1 MS	SW03	Total/NA	Solid	5035	
890-2717-1 MSD	SW03	Total/NA	Solid	5035	

Prep Batch: 31859

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

Analysis Batch: 31883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2717-1	SW03	Total/NA	Solid	8021B	31852
MB 880-31852/5-A	Method Blank	Total/NA	Solid	8021B	31852
MB 880-31859/5-A	Method Blank	Total/NA	Solid	8021B	31859
LCS 880-31852/1-A	Lab Control Sample	Total/NA	Solid	8021B	31852
LCSD 880-31852/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31852
890-2717-1 MS	SW03	Total/NA	Solid	8021B	31852
890-2717-1 MSD	SW03	Total/NA	Solid	8021B	31852

Analysis Batch: 31991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2717-1	SW03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 31570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2717-1	SW03	Total/NA	Solid	8015NM Prep	
MB 880-31570/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31570/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31570/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2712-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2712-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 31633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2717-1	SW03	Total/NA	Solid	8015B NM	31570
MB 880-31570/1-A	Method Blank	Total/NA	Solid	8015B NM	31570
LCS 880-31570/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31570
LCSD 880-31570/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31570
890-2712-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	31570
890-2712-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31570

Analysis Batch: 31744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2717-1	SW03	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Ross Draw 25

Job ID: 890-2717-1
SDG: 03E1558028

HPLC/IC

Leach Batch: 31833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2717-1	SW03	Soluble	Solid	DI Leach	
MB 880-31833/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31833/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-31833/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-17783-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17783-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2717-1 MS	SW03	Soluble	Solid	DI Leach	
890-2717-1 MSD	SW03	Soluble	Solid	DI Leach	

Analysis Batch: 31871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2717-1	SW03	Soluble	Solid	300.0	31833
MB 880-31833/1-A	Method Blank	Soluble	Solid	300.0	31833
LCS 880-31833/2-A	Lab Control Sample	Soluble	Solid	300.0	31833
LCSD 880-31833/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31833
880-17783-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	31833
880-17783-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31833
890-2717-1 MS	SW03	Soluble	Solid	300.0	31833
890-2717-1 MSD	SW03	Soluble	Solid	300.0	31833

Lab Chronicle

Client: Ensolum
Project/Site: Ross Draw 25

Job ID: 890-2717-1
SDG: 03E1558028

Client Sample ID: SW03

Date Collected: 08/03/22 10:00
Date Received: 08/03/22 14:47

Lab Sample ID: 890-2717-1

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	31852	08/09/22 14:20	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31883	08/10/22 23:30	SM	EET MID
Total/NA	Analysis	Total BTEX		1			31991	08/11/22 10:57	SM	EET MID
Total/NA	Analysis	8015 NM		1			31744	08/08/22 11:44	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31570	08/05/22 10:50	DM	EET MID
Total/NA	Analysis	8015B NM		1			31633	08/06/22 13:26	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	31833	08/09/22 08:39	AJ	EET MID
Soluble	Analysis	300.0		1			31871	08/09/22 20:31	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: Ross Draw 25

Job ID: 890-2717-1
SDG: 03E1558028

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: Ross Draw 25

Job ID: 890-2717-1
SDG: 03E1558028

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: Ross Draw 25

Job ID: 890-2717-1
SDG: 03E1558028

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2717-1	SW03	Solid	08/03/22 10:00	08/03/22 14:47	0.2'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Kalei Jennings	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	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:	817-683-2503	Email:	Kjennings@ensolum.com

Work Order Comments

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

Project Name:	ROSS Draw 25	Turn Around	
Project Number:	03E1558028	☐ Routine ☐ Rush	
Project Location:	Eddy Co	Due Date:	
Sampler's Name:	CS	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:	25.8	
Total Containers:		Corrected Temperature:	25.6	

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	Parameters: CHL	BTX	TPH	Sample Comments
SW03	S	8-3	1000	.2	C	1	/	/	/	NAPP2201444794
										CC
										105630100

890-2717 Chain of Custody

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Amanda Stiff	8/3/22 1447	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2717-1
SDG Number: 03E1558028

Login Number: 2717
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2717-1
SDG Number: 03E1558028

Login Number: 2717
List Number: 2
Creator: Rodriguez, Leticia

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

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

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 152320

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 152320
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	1/13/2023