Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2108540573
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: Adrian Baker Title: Environmental Coordinator

Signature: Adrian Baker Date: 02/28/2022

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: Robert Hamlet Date: 10/27/2022

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: Robert Hamlet Date: 10/27/2022

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

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	NAPP2108540573
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # *(assigned by OCD)*
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# *(if applicable)*

Unit Letter	Section	Township	Range	County

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

Nature and Volume of Release

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2108540573
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?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

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:

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.

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Printed Name: _____ Title: _____

Signature: Adrian Bates Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Ramona Marcus Date: 5/4/2021

NAPP2108540573

Location:	**PLU 13 DTD 903H**	
Spill Date:	**3/13/2021**	

Area 1		
Approximate Area =	56.15	cu.ft.
VOLUME OF LEAK		
Total Frac fluid =	10.00	bbls

Area 2		
Approximate Area =	3851.00	sq. ft.
Average Saturation (or depth) of spill =	1.75	inches

Average Porosity Factor =	0.03	

VOLUME OF LEAK		
Total Frac fluid =	25.00	bbls

TOTAL VOLUME OF LEAK		
Total Frac fluid =	**35.00**	**bbls**
TOTAL VOLUME RECOVERED		
Total Frac fluid =	**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 23756

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
XTO ENERGY, INC 6401 Holiday Hill Road Building #5 Midland, TX79707	5380	23756	C-141

OCD Reviewer	Condition
rmarcus	None

Incident ID	NAPP2108540573
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2108540573
District RP	
Facility ID	
Application ID	

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Printed Name: Adrian Baker Title: Environemtnal Coordinator

Signature: Adrian Baker Date: 02/28/2022

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Incident ID	NAPP2108540573
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☒ Description of remediation activities

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Printed Name: Adrian Baker Title: Environmental Coordinator

Signature: Adrian Baker Date: 02/28/2022

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

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: _____

Printed Name: _____ Title: _____

WSP USA
3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

March 1, 2022

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

RE: Closure Request Addendum
PLU 13 DTD 903H
Incident Number NAPP2108540573
Eddy County, New Mexico

To Whom it May Concern:

WSP USA Inc. (WSP), on behalf of XTO Energy, Inc. (XTO), presents the following addendum to a Closure Request submitted on September 9, 2021. This Addendum provides an update to the delineation activities completed at the PLU 13 DTD 903H (Site), located in Unit C, Section 24, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1), in response to the denial of the Closure Request by the New Mexico Oil Conservation Division (NMOCD). In the denial, NMOCD expressed concern that the lateral delineation may not be sufficient. Based on the delineation activities described below, XTO is requesting no further action (NFA) for Incident Number NAPP2108540573.

BACKGROUND

On March 13, 2021, a blender booster malfunctioned during frac operations, resulting in the release of approximately 35 barrels (bbls) of frac fluid into the impermeable containment and onto the surface of the well pad. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 32 bbls of frac fluid were recovered. XTO immediately reported the release to the New Mexico Oil Conservation Division (NMOCD) via email on March 13, 2021. A Release Notification and Corrective Action Form C-141 (Form C-141) was submitted on March 26, 2021. The release was assigned Incident Number NAPP2108540573.

The Closure Request detailed site characterization according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Based on the site characterization, the following Closure Criteria were applied:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg

- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

Site assessment and excavation activities were conducted at the Site to address the frac fluid release. Based on laboratory analytical results for the preliminary assessment soil samples (Figure 2), approximately 48 cubic yards of impacted soil were excavated and transported offsite for disposal. Closure was requested based on laboratory analytical results for the final excavation soil samples indicating benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria (Figure 3).

On January 27, 2022, NMOCD denied the Closure Request for Incident Number NAPP2108540573 for the following reasons:

- *The closure report is denied. Delineation of edges/sidewalls of a release requires clean samples equal to or less than 600 mg/kg for chlorides and 100 mg/kg for TPH. If the edge of the spill has been visually identified, a sample will need to be pulled from the clean side to prove extent. Once that is accomplished, you can excavate to the table 1 criteria on the pad. This will define the edge of the release and ensure the release did not leave the pad. While vertical definition of contamination that may be acceptable is almost exclusively driven by depth to water, as determined, and as driven by Table I in rule, horizontal definition is different. The edges (horizontal definition) of a liquid release must be determined as well. The only value for determination of horizontal impact are derived by either "background" value as determined appropriate to Rule 29, or, for chloride, 600 mg/Kg in soils. This 600 mg/Kg value is discussed in detail in 19.15.29.13 D. (1)*

ADDITIONAL DELINEATION ACTIVITIES

On January 31, 2022, WSP personnel returned to the Site to collect additional lateral delineation soil samples. Four soil samples (SS06 through SS09) were collected from a depth of 0.5 feet bgs around the release extent to confirm the lateral extent of the release. The delineation soil sample locations and the release extent are depicted on the attached Figure 3. Laboratory analytical results for soil samples SS06 through SS09 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with Closure Criteria and provided lateral 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 in Attachment 1.

CLOSURE REQUEST

Site assessment and excavation activities were completed at the Site to address the impacted soil resulting from the March 13, 2021 release of frac fluid at the Site. Based on the laboratory analytical results below the Closure Criteria in the delineation and excavation soil samples, and lateral delineation to below the most stringent Table 1 Closure Criteria, XTO respectfully requests no further action for Incident Number NAPP2108540573.

If you have any questions or comments, please do not hesitate to contact Ms. Aimee Cole at (720) 384-7365.

Sincerely,

WSP USA Inc.

Hadlie Green
Assistant Consultant, Geologist

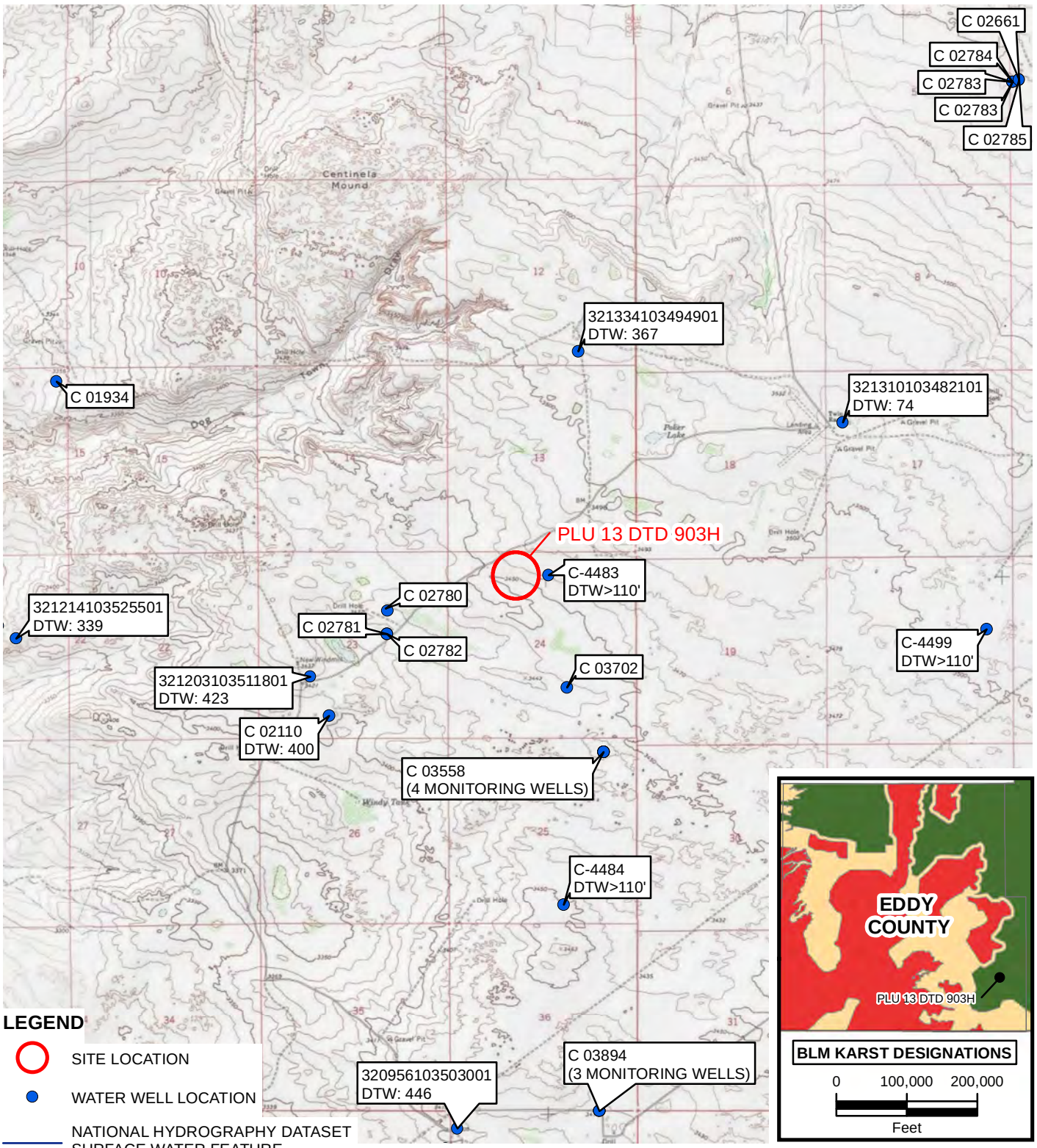
Aimee Cole
Sr. Consultant, Environmental Scientist

cc: Adrian Baker, XTO
Bureau of Land Management

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Excavation and Delineation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Laboratory Analytical Reports

FIGURES



LEGEND

- SITE LOCATION
- WATER WELL LOCATION
- NATIONAL HYDROGRAPHY DATASET SURFACE WATER FEATURE
- NATIONAL WETLANDS INVENTORY SURFACE WATER FEATURE
- LOW KARST
- MEDIUM KARST
- HIGH KARST

DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT
TD: TOTAL DEPTH IN FEET
NOTE: INCIDENT NUMBER nAPP2108540573

FIGURE 1
SITE LOCATION MAP
PLU 13 DTD 903H
UNIT C SEC 24 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC

P:\XTO Energy\GIS\MXD\012921034_PLU 13 DTD 903H\012921034_FIG01_SL_RECEPTOR_2021.mxd

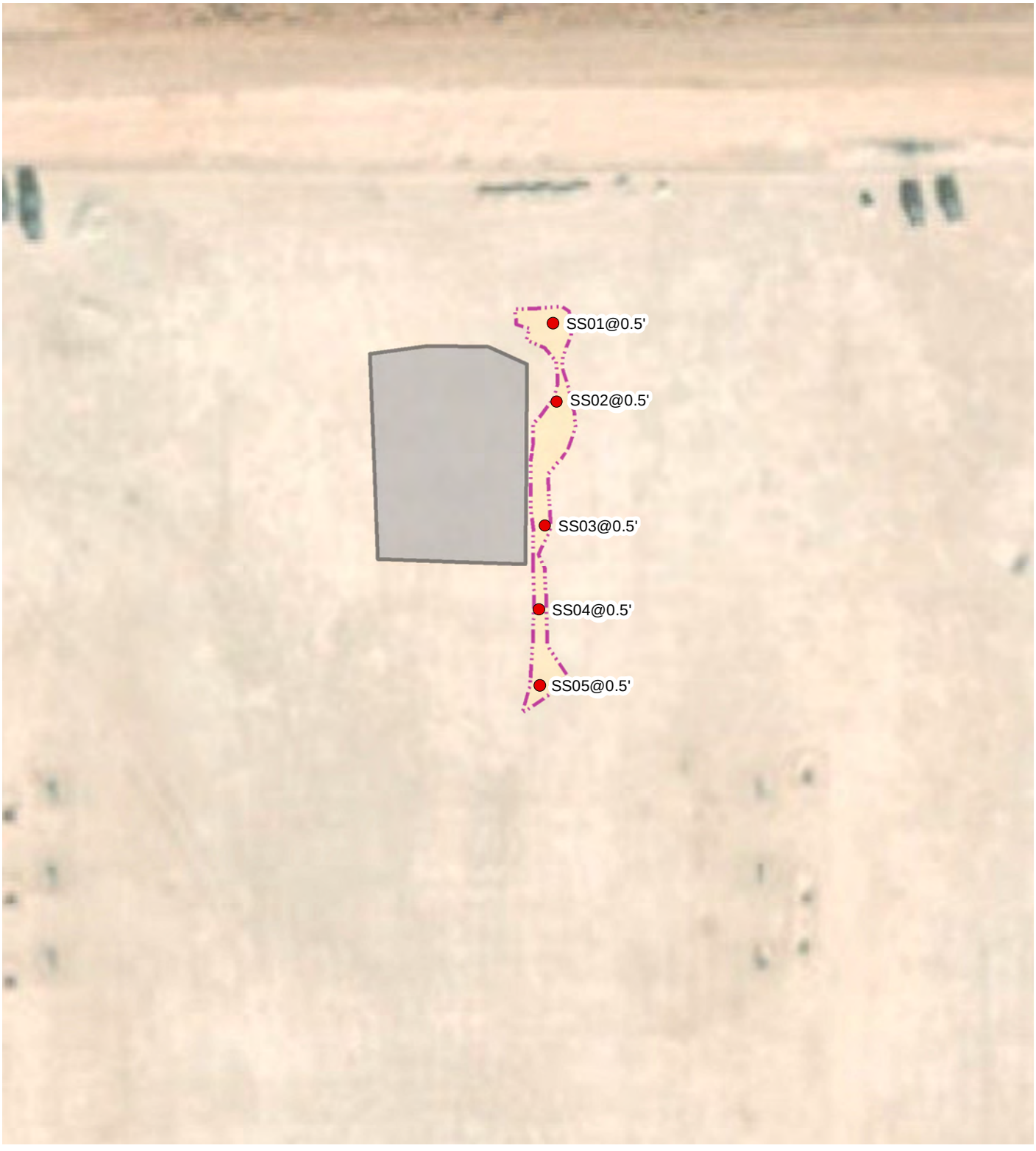


IMAGE COURTESY OF ESRI

LEGEND

PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA

RELEASE EXTENT

INFRASTRUCTURE

0 50 100

Feet

N

NOTE: INCIDENT NUMBER NAPP2108540573
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
PLU 13 DTD 903H
UNIT C SEC 24 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012921034_PLU 13 DTD 903H\012921034_FIG02_PRELIMINARY_2021.mxd

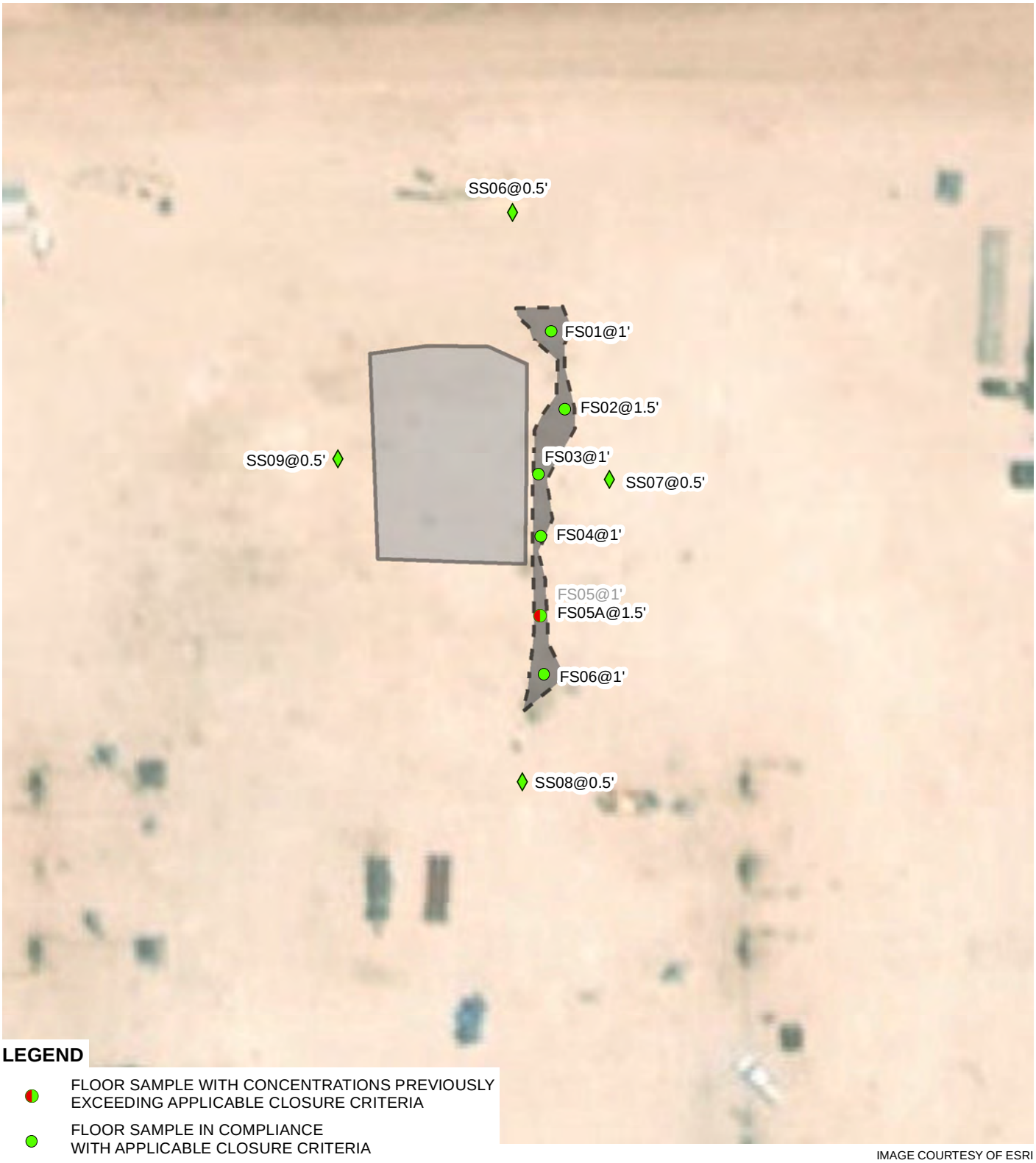


FIGURE 3
EXCAVATION AND DELINEATION SOIL SAMPLE LOCATIONS
PLU 13 DTD 903H
UNIT C SEC 24 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012921034_PLU 13 DTD 903H\012921034_FIG03_EXC_DEL_2022.mxd

TABLES

Table 1

Soil Analytical Results
PLU 13 DTD 903H
Incident Number NAPP2108540573
XTO Energy, Inc.
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
Surface Samples										
SS01	04/06/2021	0.5	<0.00249	<0.00249	3,600	<49.9	<49.9	**3,600**	**3,600**	7,540
SS02	04/06/2021	0.5	<0.00202	<0.00202	1,110	<49.9	<49.9	**1,110**	**1,110**	6,870
SS03	04/06/2021	0.5	<0.00202	<0.00202	1,110	<49.8	<49.8	**1,110**	**1,110**	734
SS04	04/06/2021	0.5	<0.00199	<0.00199	1,040	<49.9	<49.9	**1,040**	**1,040**	3,400
SS05	04/06/2021	0.5	<0.00200	<0.00200	1,140	<49.9	<49.9	**1,140**	**1,140**	2,270
Delineation Soil Samples										
SS06	01/31/2022	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	262
SS07	01/31/2022	0.5	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	300
SS08	01/31/2022	0.5	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	114
SS09	01/31/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	47.7
Excavation Floor Samples										
FS01	06/15/2021	1	<0.00201	<0.00402	67.7	<49.9	<49.9	67.7	67.7	5,070
FS02	06/15/2021	1.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	1,070
FS03	06/15/2021	1	<0.00199	<0.00398	91.6	<50.0	<50.0	91.6	91.6	1,330
FS04	06/15/2021	1	<0.00200	<0.00399	252	<50.0	105	252	357	1,060
FS05	06/15/2021	1	<0.00200	<0.00399	1,870	<49.9	1,120	**1,870**	**2,990**	899
FS05A	07/06/2021	1.5	<0.00200	<0.00399	66.9	<49.9	<49.9	66.9	66.9	108
FS06	06/15/2021	1	<0.00198	<0.00396	644	<50.0	344	644	988	724

Notes

ft - feet/foot
mg/kg - milligrams per kilograms
BTEX - benzene, toluene, ethylbenzene, and total xylenes
TPH - total petroleum hydrocarbons
DRO - diesel range organics
GRO - gasoline range organics
ORO - motor oil range organics
NMOCD - New Mexico Oil Conservation Division
NMAC - New Mexico Administrative Code
< - indicates result is less than the stated laboratory method practical quantitation limit
NE - Not Established
BOLD - indicates results exceed the higher of the background sample result or applicable regulatory standard
Text impacted soil was excavated

ATTACHMENT 1: 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: 890-1894-1
Laboratory Sample Delivery Group: TE012921034 TASK 02
Client Project/Site: PLU 13 DTD 903H
Revision: 1

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
2/25/2022 12:15:41 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: PLU 13 DTD 903H

Laboratory Job ID: 890-1894-1
SDG: TE012921034 TASK 02

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1894-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 02

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
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.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1894-1
SDG: TE012921034 TASK 02

Job ID: 890-1894-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-1894-1

REVISION

The report being provided is a revision of the original report sent on 2/7/2022. The report (revision 1) is being revised due to Per client email, correcting sample depths from 0.6' to 0.5'.

Report revision history

Receipt
The sample was received on 1/31/2022 4:53 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 2.2°C

Receipt Exceptions
The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): SS06 (890-1894-1). The container labels list <SAMPLE_ID>, while the COC lists <SAMPLEID>. The client was contacted, and the lab was instructed to <EXPLANATION_REQUIRED>.

Login- 890-1894 Times are different
Jar- 9:40
COC- 15:00
Given the sample name, date, depth are the same its safe to say these are the same samples.

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-18361 and analytical batch 880-18462 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-18405 and analytical batch 880-18620 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28) These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-18405 and analytical batch 880-18620 were outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

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 880-18363 and analytical batch 880-18607 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.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1894-1
SDG: TE012921034 TASK 02

Client Sample ID: SS06

Date Collected: 01/31/22 15:00
Date Received: 01/31/22 16:53
Sample Depth: 0.5

Lab Sample ID: 890-1894-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 00:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 00:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 00:58	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		02/03/22 09:00	02/04/22 00:58	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 00:58	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/03/22 09:00	02/04/22 00:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*02/03/22 09:00*	*02/04/22 00:58*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*02/03/22 09:00*	*02/04/22 00:58*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			02/04/22 14:29	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			02/03/22 11:27	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/02/22 14:28	02/05/22 15:05	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		02/02/22 14:28	02/05/22 15:05	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/02/22 14:28	02/05/22 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*02/02/22 14:28*	*02/05/22 15:05*	*1*
o-Terphenyl	*103*		*70 - 130*	*02/02/22 14:28*	*02/05/22 15:05*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**262**		4.95		mg/Kg			02/05/22 01:21	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1894-1
SDG: TE012921034 TASK 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)
880-10875-A-48-D MS	Matrix Spike	118	99
880-10875-A-48-E MSD	Matrix Spike Duplicate	128	96
890-1894-1	SS06	121	100
LCS 880-18361/1-A	Lab Control Sample	115	104
LCSD 880-18361/2-A	Lab Control Sample Dup	119	102
MB 880-18361/5-A	Method Blank	109	105

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-10891-A-21-D MS	Matrix Spike	72	75
880-10891-A-21-E MSD	Matrix Spike Duplicate	96	86
890-1894-1	SS06	98	103

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 880-18405/2-A	Lab Control Sample	104	109
LCSD 880-18405/3-A	Lab Control Sample Dup	97	103
MB 880-18405/1-A	Method Blank	96	97

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1894-1
SDG: TE012921034 TASK 02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-18361/5-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18361

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/03/22 22:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*02/03/22 09:00*	*02/03/22 22:14*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*02/03/22 09:00*	*02/03/22 22:14*	*1*

Lab Sample ID: LCS 880-18361/1-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18361

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08168		mg/Kg		82	70 - 130		
Toluene			0.100	0.08307		mg/Kg		83	70 - 130		
Ethylbenzene			0.100	0.08488		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			0.200	0.1732		mg/Kg		87	70 - 130		
o-Xylene			0.100	0.08940		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-18361/2-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18361

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07641		mg/Kg		76	70 - 130	7	35
Toluene			0.100	0.08096		mg/Kg		81	70 - 130	3	35
Ethylbenzene			0.100	0.08209		mg/Kg		82	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1694		mg/Kg		85	70 - 130	2	35
o-Xylene			0.100	0.08747		mg/Kg		87	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 880-10875-A-48-D MS
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U F1	0.100	0.04223	F1	mg/Kg		42	70 - 130		
Toluene	<0.00200	U F1	0.100	0.04381	F1	mg/Kg		44	70 - 130		

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1894-1
SDG: TE012921034 TASK 02

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

Lab Sample ID: 880-10875-A-48-D MS
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U F1	0.100	0.04603	F1	mg/Kg		46	70 - 130
m-Xylene & p-Xylene	<0.00401	U F1	0.200	0.09724	F1	mg/Kg		49	70 - 130
o-Xylene	<0.00200	U F1	0.100	0.05004	F1	mg/Kg		50	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-10875-A-48-E MSD
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.100	0.03234	F1	mg/Kg		32	70 - 130	27	35
Toluene	<0.00200	U F1	0.100	0.03586	F1	mg/Kg		36	70 - 130	20	35
Ethylbenzene	<0.00200	U F1	0.100	0.03495	F1	mg/Kg		35	70 - 130	27	35
m-Xylene & p-Xylene	<0.00401	U F1	0.201	0.07455	F1	mg/Kg		37	70 - 130	26	35
o-Xylene	<0.00200	U F1	0.100	0.04331	F1	mg/Kg		43	70 - 130	14	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-18405/1-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18405

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		02/02/22 14:28	02/05/22 11:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 11:54	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 11:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*02/02/22 14:28*	*02/05/22 11:54*	*1*
o-Terphenyl	*97*		*70 - 130*	*02/02/22 14:28*	*02/05/22 11:54*	*1*

Lab Sample ID: LCS 880-18405/2-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18405

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1218		mg/Kg		122	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1331	*+	mg/Kg		133	70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1894-1
SDG: TE012921034 TASK 02

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

Lab Sample ID: LCS 880-18405/2-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18405

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: LCSD 880-18405/3-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18405

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1098		mg/Kg		110	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	1165		mg/Kg		117	70 - 130	13	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: 880-10891-A-21-D MS
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18405

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	996.6		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U *+ F1 F2	1000	1008		mg/Kg		101	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	72		70 - 130
o-Terphenyl	75		70 - 130

Lab Sample ID: 880-10891-A-21-E MSD
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 18405

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1148		mg/Kg		112	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	<50.0	U *+ F1 F2	998	1328	F1 F2	mg/Kg		133	70 - 130	27	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	96		70 - 130
o-Terphenyl	86		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1894-1
SDG: TE012921034 TASK 02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-18363/1-A
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/04/22 22:17	1

Lab Sample ID: LCS 880-18363/2-A
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	246.6		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-18363/3-A
Matrix: Solid
Analysis Batch: 18607

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	269.2		mg/Kg		108	90 - 110	9	20

Lab Sample ID: 890-1896-A-1-B MS
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	114	F1	248	399.7	F1	mg/Kg		116	90 - 110		

Lab Sample ID: 890-1896-A-1-B MSD
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	114	F1	248	343.9		mg/Kg		93	90 - 110	15	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1894-1
SDG: TE012921034 TASK 02

GC VOA

Prep Batch: 18361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1894-1	SS06	Total/NA	Solid	5035	
MB 880-18361/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-18361/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-18361/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-10875-A-48-D MS	Matrix Spike	Total/NA	Solid	5035	
880-10875-A-48-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 18462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1894-1	SS06	Total/NA	Solid	8021B	18361
MB 880-18361/5-A	Method Blank	Total/NA	Solid	8021B	18361
LCS 880-18361/1-A	Lab Control Sample	Total/NA	Solid	8021B	18361
LCSD 880-18361/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	18361
880-10875-A-48-D MS	Matrix Spike	Total/NA	Solid	8021B	18361
880-10875-A-48-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	18361

Analysis Batch: 18599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1894-1	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 18405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1894-1	SS06	Total/NA	Solid	8015NM Prep	
MB 880-18405/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-18405/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-18405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-10891-A-21-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-10891-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 18476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1894-1	SS06	Total/NA	Solid	8015 NM	

Analysis Batch: 18620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1894-1	SS06	Total/NA	Solid	8015B NM	18405
MB 880-18405/1-A	Method Blank	Total/NA	Solid	8015B NM	18405
LCS 880-18405/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	18405
LCSD 880-18405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	18405
880-10891-A-21-D MS	Matrix Spike	Total/NA	Solid	8015B NM	18405
880-10891-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	18405

HPLC/IC

Leach Batch: 18363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1894-1	SS06	Soluble	Solid	DI Leach	
MB 880-18363/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-18363/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-18363/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1894-1
SDG: TE012921034 TASK 02

HPLC/IC (Continued)

Leach Batch: 18363 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1896-A-1-B MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 18607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1894-1	SS06	Soluble	Solid	300.0	18363
MB 880-18363/1-A	Method Blank	Soluble	Solid	300.0	18363
LCS 880-18363/2-A	Lab Control Sample	Soluble	Solid	300.0	18363
LCSD 880-18363/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	18363
890-1896-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	18363
890-1896-A-1-B MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	18363

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1894-1
SDG: TE012921034 TASK 02

Client Sample ID: SS06

Date Collected: 01/31/22 15:00
Date Received: 01/31/22 16:53

Lab Sample ID: 890-1894-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			18361	02/03/22 09:00	MR	XEN MID
Total/NA	Analysis	8021B		1	18462	02/04/22 00:58	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18599	02/04/22 14:29	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	18476	02/03/22 11:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			18405	02/02/22 14:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	18620	02/05/22 15:05	AJ	XEN MID
Soluble	Leach	DI Leach			18363	02/04/22 11:52	CH	XEN MID
Soluble	Analysis	300.0		1	18607	02/05/22 01:21	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: 890-1894-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 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: 890-1894-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 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: PLU 13 DTD 903H

Job ID: 890-1894-1
SDG: TE012921034 TASK 02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1894-1	SS06	Solid	01/31/22 15:00	01/31/22 16:53	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:	720-384-7365	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:	PLU 13 DTD 903H	Turn Around	
Project Number:	TE012921034 Task 02	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Mercy Rotich.	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	2.4/2.2	Thermometer ID	TNM007	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS06	S	01/31/22	15:00	0.6'	1	X	X	X

ANALYSIS REQUEST

890-1894 Chain of Custody

Work Order Notes

CC: 1665081001
API:30-015-45845

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

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		1.31.22 1653	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1894-1
SDG Number: TE012921034 TASK 02

Login Number: 1894
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: 890-1894-1
SDG Number: TE012921034 TASK 02

Login Number: 1894
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 02/02/22 01:36 PM

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.	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: 890-1895-1
Laboratory Sample Delivery Group: TE012921034 TASK 02
Client Project/Site: PLU 13 DTD 903H

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

Attn: Kalei Jennings

Authorized for release by:
2/7/2022 3:42:48 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: PLU 13 DTD 903H

Laboratory Job ID: 890-1895-1
SDG: TE012921034 TASK 02

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1895-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 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
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
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: 890-1895-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 02

Job ID: 890-1895-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-1895-1

Receipt
The sample was received on 1/31/2022 4:53 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 2.2°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-18361 and analytical batch 880-18462 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-18405 and analytical batch 880-18620 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28) These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-18405 and analytical batch 880-18620 were outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

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.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 02

Client Sample ID: SS09

Date Collected: 01/31/22 15:00
Date Received: 01/31/22 16:53
Sample Depth: 0.6

Lab Sample ID: 890-1895-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 01:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 01:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 01:19	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/03/22 09:00	02/04/22 01:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 01:19	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/03/22 09:00	02/04/22 01:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*134*	*S1+*	*70 - 130*	*02/03/22 09:00*	*02/04/22 01:19*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*02/03/22 09:00*	*02/04/22 01:19*	*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			02/04/22 14:29	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			02/03/22 11:27	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/02/22 14:28	02/05/22 15:26	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		02/02/22 14:28	02/05/22 15:26	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/02/22 14:28	02/05/22 15:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*02/02/22 14:28*	*02/05/22 15:26*	*1*
o-Terphenyl	*96*		*70 - 130*	*02/02/22 14:28*	*02/05/22 15:26*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**47.7**		5.00		mg/Kg			02/04/22 23:55	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 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)
880-10875-A-48-D MS	Matrix Spike	118	99
880-10875-A-48-E MSD	Matrix Spike Duplicate	128	96
890-1895-1	SS09	134 S1+	90
LCS 880-18361/1-A	Lab Control Sample	115	104
LCSD 880-18361/2-A	Lab Control Sample Dup	119	102
MB 880-18361/5-A	Method Blank	109	105

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-10891-A-21-D MS	Matrix Spike	72	75
880-10891-A-21-E MSD	Matrix Spike Duplicate	96	86
890-1895-1	SS09	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 880-18405/2-A	Lab Control Sample	104	109
LCSD 880-18405/3-A	Lab Control Sample Dup	97	103
MB 880-18405/1-A	Method Blank	96	97

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-18361/5-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18361

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/03/22 22:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*02/03/22 09:00*	*02/03/22 22:14*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*02/03/22 09:00*	*02/03/22 22:14*	*1*

Lab Sample ID: LCS 880-18361/1-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18361

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08168		mg/Kg		82	70 - 130		
Toluene			0.100	0.08307		mg/Kg		83	70 - 130		
Ethylbenzene			0.100	0.08488		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			0.200	0.1732		mg/Kg		87	70 - 130		
o-Xylene			0.100	0.08940		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-18361/2-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18361

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07641		mg/Kg		76	70 - 130	7	35
Toluene			0.100	0.08096		mg/Kg		81	70 - 130	3	35
Ethylbenzene			0.100	0.08209		mg/Kg		82	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1694		mg/Kg		85	70 - 130	2	35
o-Xylene			0.100	0.08747		mg/Kg		87	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 880-10875-A-48-D MS
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U F1	0.100	0.04223	F1	mg/Kg		42	70 - 130		
Toluene	<0.00200	U F1	0.100	0.04381	F1	mg/Kg		44	70 - 130		

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 02

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

Lab Sample ID: 880-10875-A-48-D MS
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U F1	0.100	0.04603	F1	mg/Kg		46	70 - 130
m-Xylene & p-Xylene	<0.00401	U F1	0.200	0.09724	F1	mg/Kg		49	70 - 130
o-Xylene	<0.00200	U F1	0.100	0.05004	F1	mg/Kg		50	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-10875-A-48-E MSD
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.100	0.03234	F1	mg/Kg		32	70 - 130	27	35
Toluene	<0.00200	U F1	0.100	0.03586	F1	mg/Kg		36	70 - 130	20	35
Ethylbenzene	<0.00200	U F1	0.100	0.03495	F1	mg/Kg		35	70 - 130	27	35
m-Xylene & p-Xylene	<0.00401	U F1	0.201	0.07455	F1	mg/Kg		37	70 - 130	26	35
o-Xylene	<0.00200	U F1	0.100	0.04331	F1	mg/Kg		43	70 - 130	14	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-18405/1-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18405

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		02/02/22 14:28	02/05/22 11:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 11:54	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 11:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*02/02/22 14:28*	*02/05/22 11:54*	*1*
o-Terphenyl	*97*		*70 - 130*	*02/02/22 14:28*	*02/05/22 11:54*	*1*

Lab Sample ID: LCS 880-18405/2-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18405

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1218		mg/Kg		122	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1331	*+	mg/Kg		133	70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 02

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

Lab Sample ID: LCS 880-18405/2-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18405

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*109*		*70 - 130*

Lab Sample ID: LCSD 880-18405/3-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18405

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1098		mg/Kg		110	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	1165		mg/Kg		117	70 - 130	13	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*97*		*70 - 130*
o-Terphenyl	*103*		*70 - 130*

Lab Sample ID: 880-10891-A-21-D MS
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18405

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	996.6		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U *+ F1 F2	1000	1008		mg/Kg		101	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*72*		*70 - 130*
o-Terphenyl	*75*		*70 - 130*

Lab Sample ID: 880-10891-A-21-E MSD
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 18405

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1148		mg/Kg		112	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	<50.0	U *+ F1 F2	998	1328	F1 F2	mg/Kg		133	70 - 130	27	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*86*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-18363/1-A
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/04/22 22:17	1

Lab Sample ID: LCS 880-18363/2-A
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	246.6		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-18363/3-A
Matrix: Solid
Analysis Batch: 18607

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	269.2		mg/Kg		108	90 - 110	9	20

Lab Sample ID: 880-10869-A-5-B MS
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	9.87		249	276.0		mg/Kg		107	90 - 110		

Lab Sample ID: 880-10869-A-5-C MSD
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	9.87		249	244.3		mg/Kg		94	90 - 110	12	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1895-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 02

GC VOA

Prep Batch: 18361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1895-1	SS09	Total/NA	Solid	5035	
MB 880-18361/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-18361/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-18361/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-10875-A-48-D MS	Matrix Spike	Total/NA	Solid	5035	
880-10875-A-48-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 18462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1895-1	SS09	Total/NA	Solid	8021B	18361
MB 880-18361/5-A	Method Blank	Total/NA	Solid	8021B	18361
LCS 880-18361/1-A	Lab Control Sample	Total/NA	Solid	8021B	18361
LCSD 880-18361/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	18361
880-10875-A-48-D MS	Matrix Spike	Total/NA	Solid	8021B	18361
880-10875-A-48-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	18361

Analysis Batch: 18599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1895-1	SS09	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 18405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1895-1	SS09	Total/NA	Solid	8015NM Prep	
MB 880-18405/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-18405/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-18405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-10891-A-21-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-10891-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 18476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1895-1	SS09	Total/NA	Solid	8015 NM	

Analysis Batch: 18620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1895-1	SS09	Total/NA	Solid	8015B NM	18405
MB 880-18405/1-A	Method Blank	Total/NA	Solid	8015B NM	18405
LCS 880-18405/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	18405
LCSD 880-18405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	18405
880-10891-A-21-D MS	Matrix Spike	Total/NA	Solid	8015B NM	18405
880-10891-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	18405

HPLC/IC

Leach Batch: 18363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1895-1	SS09	Soluble	Solid	DI Leach	
MB 880-18363/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-18363/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-18363/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1895-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 02

HPLC/IC (Continued)

Leach Batch: 18363 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10869-A-5-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-10869-A-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 18607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1895-1	SS09	Soluble	Solid	300.0	18363
MB 880-18363/1-A	Method Blank	Soluble	Solid	300.0	18363
LCS 880-18363/2-A	Lab Control Sample	Soluble	Solid	300.0	18363
LCSD 880-18363/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	18363
880-10869-A-5-B MS	Matrix Spike	Soluble	Solid	300.0	18363
880-10869-A-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	18363

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 02

Client Sample ID: SS09

Date Collected: 01/31/22 15:00
Date Received: 01/31/22 16:53

Lab Sample ID: 890-1895-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			18361	02/03/22 09:00	MR	XEN MID
Total/NA	Analysis	8021B		1	18462	02/04/22 01:19	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18599	02/04/22 14:29	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	18476	02/03/22 11:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			18405	02/02/22 14:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	18620	02/05/22 15:26	AJ	XEN MID
Soluble	Leach	DI Leach			18363	02/04/22 11:52	CH	XEN MID
Soluble	Analysis	300.0		1	18607	02/04/22 23:55	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: 890-1895-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 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: 890-1895-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 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: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1895-1	SS09	Solid	01/31/22 15:00	01/31/22 16:53	0.6

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

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:	720-384-7365 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:	PLU 13 DTD 903H	Turn Around	
Project Number:	TE012921034 Task 02	Routine	X
P.O. Number:		Rush:	
Sampler's Name:	Mercy Rotich.	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	2.4/2.2	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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS09	S	01/31/22	15:00	0.6'	1	X	X	X

890-1895 Chain of Custody

Work Order Notes

CC: 1665081001
API:30-015-45845

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 Mayer		1.31.22 1453	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1895-1
SDG Number: TE012921034 TASK 02

Login Number: 1895
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: 890-1895-1
SDG Number: TE012921034 TASK 02

Login Number: 1895
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 02/02/22 01:36 PM

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.	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	

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-1896-1
Laboratory Sample Delivery Group: TE012921034 TASK 02
Client Project/Site: PLU 13 DTD 903H

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
2/7/2022 3:43:06 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: PLU 13 DTD 903H

Laboratory Job ID: 890-1896-1
SDG: TE012921034 TASK 02

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1896-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 02

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
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: 890-1896-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 02

Job ID: 890-1896-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-1896-1

Receipt
The sample was received on 1/31/2022 4:53 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 2.2°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-18361 and analytical batch 880-18462 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-18405 and analytical batch 880-18620 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28) These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-18405 and analytical batch 880-18620 were outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

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 880-18363 and analytical batch 880-18607 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.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 02

Client Sample ID: SS08

Date Collected: 01/31/22 10:36
Date Received: 01/31/22 16:53
Sample Depth: 0.6

Lab Sample ID: 890-1896-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 01:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 01:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 01:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/04/22 01:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 01:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/04/22 01:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*02/03/22 09:00*	*02/04/22 01:39*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*02/03/22 09:00*	*02/04/22 01:39*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			02/04/22 14:29	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			02/03/22 11:27	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 15:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		02/02/22 14:28	02/05/22 15:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 15:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*02/02/22 14:28*	*02/05/22 15:47*	*1*
o-Terphenyl	*97*		*70 - 130*	*02/02/22 14:28*	*02/05/22 15:47*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**114**	**F1**	4.95		mg/Kg			02/05/22 00:01	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 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)
880-10875-A-48-D MS	Matrix Spike	118	99
880-10875-A-48-E MSD	Matrix Spike Duplicate	128	96
890-1896-1	SS08	105	93
LCS 880-18361/1-A	Lab Control Sample	115	104
LCSD 880-18361/2-A	Lab Control Sample Dup	119	102
MB 880-18361/5-A	Method Blank	109	105

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-10891-A-21-D MS	Matrix Spike	72	75
880-10891-A-21-E MSD	Matrix Spike Duplicate	96	86
890-1896-1	SS08	94	97

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 880-18405/2-A	Lab Control Sample	104	109
LCSD 880-18405/3-A	Lab Control Sample Dup	97	103
MB 880-18405/1-A	Method Blank	96	97

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-18361/5-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18361

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/03/22 22:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*02/03/22 09:00*	*02/03/22 22:14*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*02/03/22 09:00*	*02/03/22 22:14*	*1*

Lab Sample ID: LCS 880-18361/1-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18361

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08168		mg/Kg		82	70 - 130		
Toluene			0.100	0.08307		mg/Kg		83	70 - 130		
Ethylbenzene			0.100	0.08488		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			0.200	0.1732		mg/Kg		87	70 - 130		
o-Xylene			0.100	0.08940		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-18361/2-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18361

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07641		mg/Kg		76	70 - 130	7	35
Toluene			0.100	0.08096		mg/Kg		81	70 - 130	3	35
Ethylbenzene			0.100	0.08209		mg/Kg		82	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1694		mg/Kg		85	70 - 130	2	35
o-Xylene			0.100	0.08747		mg/Kg		87	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 880-10875-A-48-D MS
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U F1	0.100	0.04223	F1	mg/Kg		42	70 - 130		
Toluene	<0.00200	U F1	0.100	0.04381	F1	mg/Kg		44	70 - 130		

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 02

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

Lab Sample ID: 880-10875-A-48-D MS
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U F1	0.100	0.04603	F1	mg/Kg		46	70 - 130
m-Xylene & p-Xylene	<0.00401	U F1	0.200	0.09724	F1	mg/Kg		49	70 - 130
o-Xylene	<0.00200	U F1	0.100	0.05004	F1	mg/Kg		50	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-10875-A-48-E MSD
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.100	0.03234	F1	mg/Kg		32	70 - 130	27	35
Toluene	<0.00200	U F1	0.100	0.03586	F1	mg/Kg		36	70 - 130	20	35
Ethylbenzene	<0.00200	U F1	0.100	0.03495	F1	mg/Kg		35	70 - 130	27	35
m-Xylene & p-Xylene	<0.00401	U F1	0.201	0.07455	F1	mg/Kg		37	70 - 130	26	35
o-Xylene	<0.00200	U F1	0.100	0.04331	F1	mg/Kg		43	70 - 130	14	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-18405/1-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18405

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		02/02/22 14:28	02/05/22 11:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 11:54	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 11:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*02/02/22 14:28*	*02/05/22 11:54*	*1*
o-Terphenyl	*97*		*70 - 130*	*02/02/22 14:28*	*02/05/22 11:54*	*1*

Lab Sample ID: LCS 880-18405/2-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18405

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1218		mg/Kg		122	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1331	*+	mg/Kg		133	70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 02

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

Lab Sample ID: LCS 880-18405/2-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18405

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*109*		*70 - 130*

Lab Sample ID: LCSD 880-18405/3-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18405

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1098		mg/Kg		110	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	1165		mg/Kg		117	70 - 130	13	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*97*		*70 - 130*
o-Terphenyl	*103*		*70 - 130*

Lab Sample ID: 880-10891-A-21-D MS
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18405

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	996.6		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U *+ F1 F2	1000	1008		mg/Kg		101	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*72*		*70 - 130*
o-Terphenyl	*75*		*70 - 130*

Lab Sample ID: 880-10891-A-21-E MSD
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 18405

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1148		mg/Kg		112	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	<50.0	U *+ F1 F2	998	1328	F1 F2	mg/Kg		133	70 - 130	27	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*86*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-18363/1-A
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/04/22 22:17	1

Lab Sample ID: LCS 880-18363/2-A
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	246.6		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-18363/3-A
Matrix: Solid
Analysis Batch: 18607

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	269.2		mg/Kg		108	90 - 110	9	20

Lab Sample ID: 890-1896-1 MS
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: SS08
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	114	F1	248	399.7	F1	mg/Kg		116	90 - 110		

Lab Sample ID: 890-1896-1 MSD
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: SS08
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	114	F1	248	343.9		mg/Kg		93	90 - 110	15	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1896-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 02

GC VOA

Prep Batch: 18361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1	SS08	Total/NA	Solid	5035	
MB 880-18361/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-18361/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-18361/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-10875-A-48-D MS	Matrix Spike	Total/NA	Solid	5035	
880-10875-A-48-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 18462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1	SS08	Total/NA	Solid	8021B	18361
MB 880-18361/5-A	Method Blank	Total/NA	Solid	8021B	18361
LCS 880-18361/1-A	Lab Control Sample	Total/NA	Solid	8021B	18361
LCSD 880-18361/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	18361
880-10875-A-48-D MS	Matrix Spike	Total/NA	Solid	8021B	18361
880-10875-A-48-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	18361

Analysis Batch: 18599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1	SS08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 18405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1	SS08	Total/NA	Solid	8015NM Prep	
MB 880-18405/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-18405/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-18405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-10891-A-21-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-10891-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 18476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1	SS08	Total/NA	Solid	8015 NM	

Analysis Batch: 18620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1	SS08	Total/NA	Solid	8015B NM	18405
MB 880-18405/1-A	Method Blank	Total/NA	Solid	8015B NM	18405
LCS 880-18405/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	18405
LCSD 880-18405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	18405
880-10891-A-21-D MS	Matrix Spike	Total/NA	Solid	8015B NM	18405
880-10891-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	18405

HPLC/IC

Leach Batch: 18363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1	SS08	Soluble	Solid	DI Leach	
MB 880-18363/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-18363/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-18363/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1896-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 02

HPLC/IC (Continued)

Leach Batch: 18363 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1 MS	SS08	Soluble	Solid	DI Leach	
890-1896-1 MSD	SS08	Soluble	Solid	DI Leach	

Analysis Batch: 18607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1	SS08	Soluble	Solid	300.0	18363
MB 880-18363/1-A	Method Blank	Soluble	Solid	300.0	18363
LCS 880-18363/2-A	Lab Control Sample	Soluble	Solid	300.0	18363
LCSD 880-18363/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	18363
890-1896-1 MS	SS08	Soluble	Solid	300.0	18363
890-1896-1 MSD	SS08	Soluble	Solid	300.0	18363

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 02

Client Sample ID: SS08

Date Collected: 01/31/22 10:36
Date Received: 01/31/22 16:53

Lab Sample ID: 890-1896-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			18361	02/03/22 09:00	MR	XEN MID
Total/NA	Analysis	8021B		1	18462	02/04/22 01:39	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18599	02/04/22 14:29	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	18476	02/03/22 11:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			18405	02/02/22 14:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	18620	02/05/22 15:47	AJ	XEN MID
Soluble	Leach	DI Leach			18363	02/04/22 11:52	CH	XEN MID
Soluble	Analysis	300.0		1	18607	02/05/22 00:01	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: 890-1896-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 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: 890-1896-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 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: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1896-1	SS08	Solid	01/31/22 10:36	01/31/22 16:53	0.6

Chain of Custody

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)

Work Order No: _____

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:	720-384-7365	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:	PLU 13 DTD 903H	Turn Around	
Project Number:	TE012921034 Task 02	Routine	✓
P.O. Number:		Rush:	5 days
Sampler's Name:	Mercy Rotich.	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	2.4/2.2	Thermometer ID	TMM-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)
SS08	S	01/31/22	10:36	0.6'	1	X	X	X

890-1896 Chain of Custody

Work Order Notes

CC: 1665081001
API:30-015-45845

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

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		1.31.22 1653	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1896-1
SDG Number: TE012921034 TASK 02

Login Number: 1896
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: 890-1896-1
SDG Number: TE012921034 TASK 02

Login Number: 1896
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 02/02/22 01:36 PM

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.	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: 890-1897-1
Laboratory Sample Delivery Group: TE012921034 TASK 02
Client Project/Site: PLU 13 DTD 903H

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
2/7/2022 3:43:24 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: PLU 13 DTD 903H

Laboratory Job ID: 890-1897-1
SDG: TE012921034 TASK 02

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1897-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 02

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
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: 890-1897-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 02

Job ID: 890-1897-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-1897-1

Receipt
The sample was received on 1/31/2022 4:52 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 2.2°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-18361 and analytical batch 880-18462 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-18405 and analytical batch 880-18620 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28) These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-18405 and analytical batch 880-18620 were outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

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 880-18363 and analytical batch 880-18607 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.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 02

Client Sample ID: SS07
Date Collected: 01/31/22 10:20
Date Received: 01/31/22 16:52
Sample Depth: 0.6

Lab Sample ID: 890-1897-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		02/03/22 09:00	02/04/22 03:01	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/03/22 09:00	02/04/22 03:01	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/03/22 09:00	02/04/22 03:01	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		02/03/22 09:00	02/04/22 03:01	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/03/22 09:00	02/04/22 03:01	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		02/03/22 09:00	02/04/22 03:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*02/03/22 09:00*	*02/04/22 03:01*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*02/03/22 09:00*	*02/04/22 03:01*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			02/04/22 14:29	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			02/03/22 11:27	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 16:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		02/02/22 14:28	02/05/22 16:09	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 16:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*02/02/22 14:28*	*02/05/22 16:09*	*1*
o-Terphenyl	*110*		*70 - 130*	*02/02/22 14:28*	*02/05/22 16:09*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**300**		5.04		mg/Kg			02/05/22 00:20	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 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)
880-10875-A-48-D MS	Matrix Spike	118	99
880-10875-A-48-E MSD	Matrix Spike Duplicate	128	96
890-1897-1	SS07	111	102
LCS 880-18361/1-A	Lab Control Sample	115	104
LCSD 880-18361/2-A	Lab Control Sample Dup	119	102
MB 880-18361/5-A	Method Blank	109	105

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-10891-A-21-D MS	Matrix Spike	72	75
880-10891-A-21-E MSD	Matrix Spike Duplicate	96	86
890-1897-1	SS07	105	110

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 880-18405/2-A	Lab Control Sample	104	109
LCSD 880-18405/3-A	Lab Control Sample Dup	97	103
MB 880-18405/1-A	Method Blank	96	97

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-18361/5-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18361

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/03/22 22:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*02/03/22 09:00*	*02/03/22 22:14*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*02/03/22 09:00*	*02/03/22 22:14*	*1*

Lab Sample ID: LCS 880-18361/1-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18361

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08168		mg/Kg		82	70 - 130		
Toluene			0.100	0.08307		mg/Kg		83	70 - 130		
Ethylbenzene			0.100	0.08488		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			0.200	0.1732		mg/Kg		87	70 - 130		
o-Xylene			0.100	0.08940		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-18361/2-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18361

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07641		mg/Kg		76	70 - 130	7	35
Toluene			0.100	0.08096		mg/Kg		81	70 - 130	3	35
Ethylbenzene			0.100	0.08209		mg/Kg		82	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1694		mg/Kg		85	70 - 130	2	35
o-Xylene			0.100	0.08747		mg/Kg		87	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 880-10875-A-48-D MS
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U F1	0.100	0.04223	F1	mg/Kg		42	70 - 130		
Toluene	<0.00200	U F1	0.100	0.04381	F1	mg/Kg		44	70 - 130		

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1897-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 02

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

Lab Sample ID: 880-10875-A-48-D MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 18462 **Prep Batch: 18361**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U F1	0.100	0.04603	F1	mg/Kg		46	70 - 130
m-Xylene & p-Xylene	<0.00401	U F1	0.200	0.09724	F1	mg/Kg		49	70 - 130
o-Xylene	<0.00200	U F1	0.100	0.05004	F1	mg/Kg		50	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-10875-A-48-E MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 18462 **Prep Batch: 18361**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.100	0.03234	F1	mg/Kg		32	70 - 130	27	35
Toluene	<0.00200	U F1	0.100	0.03586	F1	mg/Kg		36	70 - 130	20	35
Ethylbenzene	<0.00200	U F1	0.100	0.03495	F1	mg/Kg		35	70 - 130	27	35
m-Xylene & p-Xylene	<0.00401	U F1	0.201	0.07455	F1	mg/Kg		37	70 - 130	26	35
o-Xylene	<0.00200	U F1	0.100	0.04331	F1	mg/Kg		43	70 - 130	14	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-18405/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 18620 **Prep Batch: 18405**

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		02/02/22 14:28	02/05/22 11:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 11:54	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 11:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*02/02/22 14:28*	*02/05/22 11:54*	*1*
o-Terphenyl	*97*		*70 - 130*	*02/02/22 14:28*	*02/05/22 11:54*	*1*

Lab Sample ID: LCS 880-18405/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 18620 **Prep Batch: 18405**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1218		mg/Kg		122	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1331	*+	mg/Kg		133	70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 02

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

Lab Sample ID: LCS 880-18405/2-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18405

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*109*		*70 - 130*

Lab Sample ID: LCSD 880-18405/3-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18405

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1098		mg/Kg		110	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	1165		mg/Kg		117	70 - 130	13	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*97*		*70 - 130*
o-Terphenyl	*103*		*70 - 130*

Lab Sample ID: 880-10891-A-21-D MS
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18405

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	996.6		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U *+ F1 F2	1000	1008		mg/Kg		101	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*72*		*70 - 130*
o-Terphenyl	*75*		*70 - 130*

Lab Sample ID: 880-10891-A-21-E MSD
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 18405

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1148		mg/Kg		112	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	<50.0	U *+ F1 F2	998	1328	F1 F2	mg/Kg		133	70 - 130	27	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*86*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-18363/1-A
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/04/22 22:17	1

Lab Sample ID: LCS 880-18363/2-A
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	246.6		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-18363/3-A
Matrix: Solid
Analysis Batch: 18607

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	269.2		mg/Kg		108	90 - 110	9	20

Lab Sample ID: 890-1896-A-1-B MS
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	114	F1	248	399.7	F1	mg/Kg		116	90 - 110		

Lab Sample ID: 890-1896-A-1-B MSD
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	114	F1	248	343.9		mg/Kg		93	90 - 110	15	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1897-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 02

GC VOA

Prep Batch: 18361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1897-1	SS07	Total/NA	Solid	5035	
MB 880-18361/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-18361/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-18361/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-10875-A-48-D MS	Matrix Spike	Total/NA	Solid	5035	
880-10875-A-48-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 18462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1897-1	SS07	Total/NA	Solid	8021B	18361
MB 880-18361/5-A	Method Blank	Total/NA	Solid	8021B	18361
LCS 880-18361/1-A	Lab Control Sample	Total/NA	Solid	8021B	18361
LCSD 880-18361/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	18361
880-10875-A-48-D MS	Matrix Spike	Total/NA	Solid	8021B	18361
880-10875-A-48-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	18361

Analysis Batch: 18599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1897-1	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 18405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1897-1	SS07	Total/NA	Solid	8015NM Prep	
MB 880-18405/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-18405/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-18405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-10891-A-21-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-10891-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 18476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1897-1	SS07	Total/NA	Solid	8015 NM	

Analysis Batch: 18620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1897-1	SS07	Total/NA	Solid	8015B NM	18405
MB 880-18405/1-A	Method Blank	Total/NA	Solid	8015B NM	18405
LCS 880-18405/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	18405
LCSD 880-18405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	18405
880-10891-A-21-D MS	Matrix Spike	Total/NA	Solid	8015B NM	18405
880-10891-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	18405

HPLC/IC

Leach Batch: 18363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1897-1	SS07	Soluble	Solid	DI Leach	
MB 880-18363/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-18363/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-18363/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1897-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 02

HPLC/IC (Continued)

Leach Batch: 18363 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1896-A-1-B MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 18607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1897-1	SS07	Soluble	Solid	300.0	18363
MB 880-18363/1-A	Method Blank	Soluble	Solid	300.0	18363
LCS 880-18363/2-A	Lab Control Sample	Soluble	Solid	300.0	18363
LCSD 880-18363/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	18363
890-1896-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	18363
890-1896-A-1-B MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	18363

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 02

Client Sample ID: SS07

Date Collected: 01/31/22 10:20
Date Received: 01/31/22 16:52

Lab Sample ID: 890-1897-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			18361	02/03/22 09:00	MR	XEN MID
Total/NA	Analysis	8021B		1	18462	02/04/22 03:01	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18599	02/04/22 14:29	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	18476	02/03/22 11:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			18405	02/02/22 14:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	18620	02/05/22 16:09	AJ	XEN MID
Soluble	Leach	DI Leach			18363	02/04/22 11:52	CH	XEN MID
Soluble	Analysis	300.0		1	18607	02/05/22 00:20	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: 890-1897-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 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: 890-1897-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 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: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1897-1	SS07	Solid	01/31/22 10:20	01/31/22 16:52	0.6

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:	720-384-7365	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:	PLU 13 DTD 903H	Turn Around	
Project Number:	TE012921034 Task 02	Routine	✓
P.O. Number:		Rush:	5 days
Sampler's Name:	Mercy Rotich.	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	2.4 / 2.2	Thermometer ID	TNM-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)	Sample Comments
SS07	S	01/31/22	10:20	0.6'	1	X	X	X	Discrete

890-1897 Chain of Custody

Work Order Notes

CC: 1665081001

API:30-015-45845

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	[signature]	[signature]	1.31.22 1652			
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1897-1
SDG Number: TE012921034 TASK 02

Login Number: 1897
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: 890-1897-1
SDG Number: TE012921034 TASK 02

Login Number: 1897
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 02/02/22 01:36 PM

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.	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	

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-1895-1
Laboratory Sample Delivery Group: TE012921034 TASK 02
Client Project/Site: PLU 13 DTD 903H
Revision: 1

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
2/25/2022 12:18:14 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: PLU 13 DTD 903H

Laboratory Job ID: 890-1895-1
SDG: TE012921034 TASK 02

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1895-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 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
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
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.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 02

Job ID: 890-1895-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-1895-1

REVISION

The report being provided is a revision of the original report sent on 2/7/2022. The report (revision 1) is being revised due to Per client email, correcting sample depths from 0.6' to 0.5'.

Report revision history

Receipt
The sample was received on 1/31/2022 4:53 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 2.2°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-18361 and analytical batch 880-18462 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-18405 and analytical batch 880-18620 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28) These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-18405 and analytical batch 880-18620 were outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

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.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 02

Client Sample ID: SS09

Date Collected: 01/31/22 15:00
Date Received: 01/31/22 16:53
Sample Depth: 0.5

Lab Sample ID: 890-1895-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 01:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 01:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 01:19	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/03/22 09:00	02/04/22 01:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 01:19	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/03/22 09:00	02/04/22 01:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*134*	*S1+*	*70 - 130*	*02/03/22 09:00*	*02/04/22 01:19*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*02/03/22 09:00*	*02/04/22 01:19*	*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			02/04/22 14:29	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			02/03/22 11:27	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/02/22 14:28	02/05/22 15:26	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		02/02/22 14:28	02/05/22 15:26	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/02/22 14:28	02/05/22 15:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*02/02/22 14:28*	*02/05/22 15:26*	*1*
o-Terphenyl	*96*		*70 - 130*	*02/02/22 14:28*	*02/05/22 15:26*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**47.7**		5.00		mg/Kg			02/04/22 23:55	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 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)
880-10875-A-48-D MS	Matrix Spike	118	99
880-10875-A-48-E MSD	Matrix Spike Duplicate	128	96
890-1895-1	SS09	134 S1+	90
LCS 880-18361/1-A	Lab Control Sample	115	104
LCSD 880-18361/2-A	Lab Control Sample Dup	119	102
MB 880-18361/5-A	Method Blank	109	105

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-10891-A-21-D MS	Matrix Spike	72	75
880-10891-A-21-E MSD	Matrix Spike Duplicate	96	86
890-1895-1	SS09	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 880-18405/2-A	Lab Control Sample	104	109
LCSD 880-18405/3-A	Lab Control Sample Dup	97	103
MB 880-18405/1-A	Method Blank	96	97

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-18361/5-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18361

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/03/22 22:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*02/03/22 09:00*	*02/03/22 22:14*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*02/03/22 09:00*	*02/03/22 22:14*	*1*

Lab Sample ID: LCS 880-18361/1-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18361

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08168		mg/Kg		82	70 - 130		
Toluene			0.100	0.08307		mg/Kg		83	70 - 130		
Ethylbenzene			0.100	0.08488		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			0.200	0.1732		mg/Kg		87	70 - 130		
o-Xylene			0.100	0.08940		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-18361/2-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18361

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07641		mg/Kg		76	70 - 130	7	35
Toluene			0.100	0.08096		mg/Kg		81	70 - 130	3	35
Ethylbenzene			0.100	0.08209		mg/Kg		82	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1694		mg/Kg		85	70 - 130	2	35
o-Xylene			0.100	0.08747		mg/Kg		87	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 880-10875-A-48-D MS
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U F1	0.100	0.04223	F1	mg/Kg		42	70 - 130		
Toluene	<0.00200	U F1	0.100	0.04381	F1	mg/Kg		44	70 - 130		

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 02

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

Lab Sample ID: 880-10875-A-48-D MS
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U F1	0.100	0.04603	F1	mg/Kg		46	70 - 130
m-Xylene & p-Xylene	<0.00401	U F1	0.200	0.09724	F1	mg/Kg		49	70 - 130
o-Xylene	<0.00200	U F1	0.100	0.05004	F1	mg/Kg		50	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-10875-A-48-E MSD
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.100	0.03234	F1	mg/Kg		32	70 - 130	27	35
Toluene	<0.00200	U F1	0.100	0.03586	F1	mg/Kg		36	70 - 130	20	35
Ethylbenzene	<0.00200	U F1	0.100	0.03495	F1	mg/Kg		35	70 - 130	27	35
m-Xylene & p-Xylene	<0.00401	U F1	0.201	0.07455	F1	mg/Kg		37	70 - 130	26	35
o-Xylene	<0.00200	U F1	0.100	0.04331	F1	mg/Kg		43	70 - 130	14	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-18405/1-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18405

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		02/02/22 14:28	02/05/22 11:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 11:54	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 11:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*02/02/22 14:28*	*02/05/22 11:54*	*1*
o-Terphenyl	*97*		*70 - 130*	*02/02/22 14:28*	*02/05/22 11:54*	*1*

Lab Sample ID: LCS 880-18405/2-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18405

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1218		mg/Kg		122	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1331	*+	mg/Kg		133	70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 02

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

Lab Sample ID: LCS 880-18405/2-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18405

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: LCSD 880-18405/3-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18405

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1098		mg/Kg		110	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	1165		mg/Kg		117	70 - 130	13	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: 880-10891-A-21-D MS
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18405

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	996.6		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U *+ F1 F2	1000	1008		mg/Kg		101	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	72		70 - 130
o-Terphenyl	75		70 - 130

Lab Sample ID: 880-10891-A-21-E MSD
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 18405

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1148		mg/Kg		112	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	<50.0	U *+ F1 F2	998	1328	F1 F2	mg/Kg		133	70 - 130	27	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	96		70 - 130
o-Terphenyl	86		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-18363/1-A
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/04/22 22:17	1

Lab Sample ID: LCS 880-18363/2-A
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	246.6		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-18363/3-A
Matrix: Solid
Analysis Batch: 18607

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	269.2		mg/Kg		108	90 - 110	9	20

Lab Sample ID: 880-10869-A-5-B MS
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	9.87		249	276.0		mg/Kg		107	90 - 110		

Lab Sample ID: 880-10869-A-5-C MSD
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	9.87		249	244.3		mg/Kg		94	90 - 110	12	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 02

GC VOA

Prep Batch: 18361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1895-1	SS09	Total/NA	Solid	5035	
MB 880-18361/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-18361/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-18361/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-10875-A-48-D MS	Matrix Spike	Total/NA	Solid	5035	
880-10875-A-48-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 18462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1895-1	SS09	Total/NA	Solid	8021B	18361
MB 880-18361/5-A	Method Blank	Total/NA	Solid	8021B	18361
LCS 880-18361/1-A	Lab Control Sample	Total/NA	Solid	8021B	18361
LCSD 880-18361/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	18361
880-10875-A-48-D MS	Matrix Spike	Total/NA	Solid	8021B	18361
880-10875-A-48-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	18361

Analysis Batch: 18599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1895-1	SS09	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 18405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1895-1	SS09	Total/NA	Solid	8015NM Prep	
MB 880-18405/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-18405/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-18405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-10891-A-21-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-10891-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 18476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1895-1	SS09	Total/NA	Solid	8015 NM	

Analysis Batch: 18620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1895-1	SS09	Total/NA	Solid	8015B NM	18405
MB 880-18405/1-A	Method Blank	Total/NA	Solid	8015B NM	18405
LCS 880-18405/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	18405
LCSD 880-18405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	18405
880-10891-A-21-D MS	Matrix Spike	Total/NA	Solid	8015B NM	18405
880-10891-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	18405

HPLC/IC

Leach Batch: 18363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1895-1	SS09	Soluble	Solid	DI Leach	
MB 880-18363/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-18363/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-18363/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 02

HPLC/IC (Continued)

Leach Batch: 18363 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10869-A-5-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-10869-A-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 18607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1895-1	SS09	Soluble	Solid	300.0	18363
MB 880-18363/1-A	Method Blank	Soluble	Solid	300.0	18363
LCS 880-18363/2-A	Lab Control Sample	Soluble	Solid	300.0	18363
LCSD 880-18363/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	18363
880-10869-A-5-B MS	Matrix Spike	Soluble	Solid	300.0	18363
880-10869-A-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	18363

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 02

Client Sample ID: SS09

Date Collected: 01/31/22 15:00
Date Received: 01/31/22 16:53

Lab Sample ID: 890-1895-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			18361	02/03/22 09:00	MR	XEN MID
Total/NA	Analysis	8021B		1	18462	02/04/22 01:19	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18599	02/04/22 14:29	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	18476	02/03/22 11:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			18405	02/02/22 14:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	18620	02/05/22 15:26	AJ	XEN MID
Soluble	Leach	DI Leach			18363	02/04/22 11:52	CH	XEN MID
Soluble	Analysis	300.0		1	18607	02/04/22 23:55	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: 890-1895-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 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: 890-1895-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 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: PLU 13 DTD 903H

Job ID: 890-1895-1
SDG: TE012921034 TASK 02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1895-1	SS09	Solid	01/31/22 15:00	01/31/22 16:53	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

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:	720-384-7365 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:	PLU 13 DTD 903H	Turn Around	
Project Number:	TE012921034 Task 02	Routine	X
P.O. Number:		Rush:	
Sampler's Name:	Mercy Rotich.	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	2.4/2.2	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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS09	S	01/31/22	15:00	0.6'	1	X	X	X

890-1895 Chain of Custody

Work Order Notes

CC: 1665081001
API:30-015-45845

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 Mayer		1.31.22 1453	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1895-1
SDG Number: TE012921034 TASK 02

Login Number: 1895
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: 890-1895-1
SDG Number: TE012921034 TASK 02

Login Number: 1895
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 02/02/22 01:36 PM

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.	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	

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-1896-1
Laboratory Sample Delivery Group: TE012921034 TASK 02
Client Project/Site: PLU 13 DTD 903H
Revision: 1

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
2/25/2022 12:17:23 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: PLU 13 DTD 903H

Laboratory Job ID: 890-1896-1
SDG: TE012921034 TASK 02

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1896-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 02

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
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.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 02

Job ID: 890-1896-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-1896-1

REVISION

The report being provided is a revision of the original report sent on 2/7/2022. The report (revision 1) is being revised due to Per client email, correcting sample depths from 0.6' to 0.5'.

Report revision history

Receipt
The sample was received on 1/31/2022 4:53 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 2.2°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-18361 and analytical batch 880-18462 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-18405 and analytical batch 880-18620 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28) These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-18405 and analytical batch 880-18620 were outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

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 880-18363 and analytical batch 880-18607 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.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 02

Client Sample ID: SS08

Date Collected: 01/31/22 10:36
Date Received: 01/31/22 16:53
Sample Depth: 0.5

Lab Sample ID: 890-1896-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 01:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 01:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 01:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/04/22 01:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/04/22 01:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/04/22 01:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*02/03/22 09:00*	*02/04/22 01:39*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*02/03/22 09:00*	*02/04/22 01:39*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			02/04/22 14:29	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			02/03/22 11:27	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 15:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		02/02/22 14:28	02/05/22 15:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 15:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*02/02/22 14:28*	*02/05/22 15:47*	*1*
o-Terphenyl	*97*		*70 - 130*	*02/02/22 14:28*	*02/05/22 15:47*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**114**	**F1**	4.95		mg/Kg			02/05/22 00:01	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 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)
880-10875-A-48-D MS	Matrix Spike	118	99
880-10875-A-48-E MSD	Matrix Spike Duplicate	128	96
890-1896-1	SS08	105	93
LCS 880-18361/1-A	Lab Control Sample	115	104
LCSD 880-18361/2-A	Lab Control Sample Dup	119	102
MB 880-18361/5-A	Method Blank	109	105

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-10891-A-21-D MS	Matrix Spike	72	75
880-10891-A-21-E MSD	Matrix Spike Duplicate	96	86
890-1896-1	SS08	94	97

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 880-18405/2-A	Lab Control Sample	104	109
LCSD 880-18405/3-A	Lab Control Sample Dup	97	103
MB 880-18405/1-A	Method Blank	96	97

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-18361/5-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18361

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/03/22 22:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*02/03/22 09:00*	*02/03/22 22:14*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*02/03/22 09:00*	*02/03/22 22:14*	*1*

Lab Sample ID: LCS 880-18361/1-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18361

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08168		mg/Kg		82	70 - 130		
Toluene			0.100	0.08307		mg/Kg		83	70 - 130		
Ethylbenzene			0.100	0.08488		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			0.200	0.1732		mg/Kg		87	70 - 130		
o-Xylene			0.100	0.08940		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-18361/2-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18361

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07641		mg/Kg		76	70 - 130	7	35
Toluene			0.100	0.08096		mg/Kg		81	70 - 130	3	35
Ethylbenzene			0.100	0.08209		mg/Kg		82	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1694		mg/Kg		85	70 - 130	2	35
o-Xylene			0.100	0.08747		mg/Kg		87	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 880-10875-A-48-D MS
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U F1	0.100	0.04223	F1	mg/Kg		42	70 - 130		
Toluene	<0.00200	U F1	0.100	0.04381	F1	mg/Kg		44	70 - 130		

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 02

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

Lab Sample ID: 880-10875-A-48-D MS
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U F1	0.100	0.04603	F1	mg/Kg		46	70 - 130
m-Xylene & p-Xylene	<0.00401	U F1	0.200	0.09724	F1	mg/Kg		49	70 - 130
o-Xylene	<0.00200	U F1	0.100	0.05004	F1	mg/Kg		50	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-10875-A-48-E MSD
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.100	0.03234	F1	mg/Kg		32	70 - 130	27	35
Toluene	<0.00200	U F1	0.100	0.03586	F1	mg/Kg		36	70 - 130	20	35
Ethylbenzene	<0.00200	U F1	0.100	0.03495	F1	mg/Kg		35	70 - 130	27	35
m-Xylene & p-Xylene	<0.00401	U F1	0.201	0.07455	F1	mg/Kg		37	70 - 130	26	35
o-Xylene	<0.00200	U F1	0.100	0.04331	F1	mg/Kg		43	70 - 130	14	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-18405/1-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18405

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		02/02/22 14:28	02/05/22 11:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 11:54	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 11:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*02/02/22 14:28*	*02/05/22 11:54*	*1*
o-Terphenyl	*97*		*70 - 130*	*02/02/22 14:28*	*02/05/22 11:54*	*1*

Lab Sample ID: LCS 880-18405/2-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18405

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1218		mg/Kg		122	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1331	*+	mg/Kg		133	70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 02

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

Lab Sample ID: LCS 880-18405/2-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18405

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: LCSD 880-18405/3-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18405

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1098		mg/Kg		110	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	1165		mg/Kg		117	70 - 130	13	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: 880-10891-A-21-D MS
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18405

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	996.6		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U *+ F1 F2	1000	1008		mg/Kg		101	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	72		70 - 130
o-Terphenyl	75		70 - 130

Lab Sample ID: 880-10891-A-21-E MSD
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 18405

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1148		mg/Kg		112	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	<50.0	U *+ F1 F2	998	1328	F1 F2	mg/Kg		133	70 - 130	27	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	96		70 - 130
o-Terphenyl	86		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-18363/1-A
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/04/22 22:17	1

Lab Sample ID: LCS 880-18363/2-A
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	246.6		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-18363/3-A
Matrix: Solid
Analysis Batch: 18607

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	269.2		mg/Kg		108	90 - 110	9	20

Lab Sample ID: 890-1896-1 MS
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: SS08
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	114	F1	248	399.7	F1	mg/Kg		116	90 - 110		

Lab Sample ID: 890-1896-1 MSD
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: SS08
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	114	F1	248	343.9		mg/Kg		93	90 - 110	15	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 02

GC VOA

Prep Batch: 18361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1	SS08	Total/NA	Solid	5035	
MB 880-18361/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-18361/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-18361/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-10875-A-48-D MS	Matrix Spike	Total/NA	Solid	5035	
880-10875-A-48-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 18462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1	SS08	Total/NA	Solid	8021B	18361
MB 880-18361/5-A	Method Blank	Total/NA	Solid	8021B	18361
LCS 880-18361/1-A	Lab Control Sample	Total/NA	Solid	8021B	18361
LCSD 880-18361/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	18361
880-10875-A-48-D MS	Matrix Spike	Total/NA	Solid	8021B	18361
880-10875-A-48-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	18361

Analysis Batch: 18599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1	SS08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 18405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1	SS08	Total/NA	Solid	8015NM Prep	
MB 880-18405/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-18405/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-18405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-10891-A-21-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-10891-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 18476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1	SS08	Total/NA	Solid	8015 NM	

Analysis Batch: 18620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1	SS08	Total/NA	Solid	8015B NM	18405
MB 880-18405/1-A	Method Blank	Total/NA	Solid	8015B NM	18405
LCS 880-18405/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	18405
LCSD 880-18405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	18405
880-10891-A-21-D MS	Matrix Spike	Total/NA	Solid	8015B NM	18405
880-10891-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	18405

HPLC/IC

Leach Batch: 18363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1	SS08	Soluble	Solid	DI Leach	
MB 880-18363/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-18363/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-18363/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 02

HPLC/IC (Continued)

Leach Batch: 18363 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1 MS	SS08	Soluble	Solid	DI Leach	
890-1896-1 MSD	SS08	Soluble	Solid	DI Leach	

Analysis Batch: 18607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-1	SS08	Soluble	Solid	300.0	18363
MB 880-18363/1-A	Method Blank	Soluble	Solid	300.0	18363
LCS 880-18363/2-A	Lab Control Sample	Soluble	Solid	300.0	18363
LCSD 880-18363/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	18363
890-1896-1 MS	SS08	Soluble	Solid	300.0	18363
890-1896-1 MSD	SS08	Soluble	Solid	300.0	18363

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 02

Client Sample ID: SS08

Date Collected: 01/31/22 10:36
Date Received: 01/31/22 16:53

Lab Sample ID: 890-1896-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			18361	02/03/22 09:00	MR	XEN MID
Total/NA	Analysis	8021B		1	18462	02/04/22 01:39	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18599	02/04/22 14:29	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	18476	02/03/22 11:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			18405	02/02/22 14:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	18620	02/05/22 15:47	AJ	XEN MID
Soluble	Leach	DI Leach			18363	02/04/22 11:52	CH	XEN MID
Soluble	Analysis	300.0		1	18607	02/05/22 00:01	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: 890-1896-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 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: 890-1896-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 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: PLU 13 DTD 903H

Job ID: 890-1896-1
SDG: TE012921034 TASK 02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1896-1	SS08	Solid	01/31/22 10:36	01/31/22 16:53	0.5

Chain of Custody

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)

Work Order No: _____

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:	720-384-7365	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:	PLU 13 DTD 903H	Turn Around	
Project Number:	TE012921034 Task 02	Routine	✓
P.O. Number:		Rush:	5 days
Sampler's Name:	Mercy Rotich.	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	2.4/2.2	Thermometer ID	TMM-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)
SS08	S	01/31/22	10:36	0.6'	1	X	X	X

890-1896 Chain of Custody

Work Order Notes

CC: 1665081001
API:30-015-45845

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

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		1.31.22 1653	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1896-1
SDG Number: TE012921034 TASK 02

Login Number: 1896
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: 890-1896-1
SDG Number: TE012921034 TASK 02

Login Number: 1896
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 02/02/22 01:36 PM

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.	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	

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-1897-1
Laboratory Sample Delivery Group: TE012921034 TASK 02
Client Project/Site: PLU 13 DTD 903H
Revision: 1

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
2/25/2022 12:14:34 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: PLU 13 DTD 903H

Laboratory Job ID: 890-1897-1
SDG: TE012921034 TASK 02

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1897-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 02

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
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.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 02

Job ID: 890-1897-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-1897-1

REVISION

The report being provided is a revision of the original report sent on 2/7/2022. The report (revision 1) is being revised due to Per client email, correcting sample depths from 0.6' to 0.5'.

Report revision history

Receipt
The sample was received on 1/31/2022 4:52 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 2.2°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-18361 and analytical batch 880-18462 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-18405 and analytical batch 880-18620 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28) These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-18405 and analytical batch 880-18620 were outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

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 880-18363 and analytical batch 880-18607 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.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 02

Client Sample ID: SS07

Date Collected: 01/31/22 10:20
Date Received: 01/31/22 16:52
Sample Depth: 0.5

Lab Sample ID: 890-1897-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		02/03/22 09:00	02/04/22 03:01	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/03/22 09:00	02/04/22 03:01	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/03/22 09:00	02/04/22 03:01	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		02/03/22 09:00	02/04/22 03:01	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/03/22 09:00	02/04/22 03:01	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		02/03/22 09:00	02/04/22 03:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*02/03/22 09:00*	*02/04/22 03:01*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*02/03/22 09:00*	*02/04/22 03:01*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			02/04/22 14:29	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			02/03/22 11:27	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 16:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		02/02/22 14:28	02/05/22 16:09	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 16:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*02/02/22 14:28*	*02/05/22 16:09*	*1*
o-Terphenyl	*110*		*70 - 130*	*02/02/22 14:28*	*02/05/22 16:09*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**300**		5.04		mg/Kg			02/05/22 00:20	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 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)
880-10875-A-48-D MS	Matrix Spike	118	99
880-10875-A-48-E MSD	Matrix Spike Duplicate	128	96
890-1897-1	SS07	111	102
LCS 880-18361/1-A	Lab Control Sample	115	104
LCSD 880-18361/2-A	Lab Control Sample Dup	119	102
MB 880-18361/5-A	Method Blank	109	105

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-10891-A-21-D MS	Matrix Spike	72	75
880-10891-A-21-E MSD	Matrix Spike Duplicate	96	86
890-1897-1	SS07	105	110

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 880-18405/2-A	Lab Control Sample	104	109
LCSD 880-18405/3-A	Lab Control Sample Dup	97	103
MB 880-18405/1-A	Method Blank	96	97

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-18361/5-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18361

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/22 09:00	02/03/22 22:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/03/22 09:00	02/03/22 22:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*02/03/22 09:00*	*02/03/22 22:14*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*02/03/22 09:00*	*02/03/22 22:14*	*1*

Lab Sample ID: LCS 880-18361/1-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18361

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08168		mg/Kg		82	70 - 130		
Toluene			0.100	0.08307		mg/Kg		83	70 - 130		
Ethylbenzene			0.100	0.08488		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			0.200	0.1732		mg/Kg		87	70 - 130		
o-Xylene			0.100	0.08940		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-18361/2-A
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18361

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07641		mg/Kg		76	70 - 130	7	35
Toluene			0.100	0.08096		mg/Kg		81	70 - 130	3	35
Ethylbenzene			0.100	0.08209		mg/Kg		82	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1694		mg/Kg		85	70 - 130	2	35
o-Xylene			0.100	0.08747		mg/Kg		87	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 880-10875-A-48-D MS
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U F1	0.100	0.04223	F1	mg/Kg		42	70 - 130		
Toluene	<0.00200	U F1	0.100	0.04381	F1	mg/Kg		44	70 - 130		

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 02

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

Lab Sample ID: 880-10875-A-48-D MS
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U F1	0.100	0.04603	F1	mg/Kg		46	70 - 130
m-Xylene & p-Xylene	<0.00401	U F1	0.200	0.09724	F1	mg/Kg		49	70 - 130
o-Xylene	<0.00200	U F1	0.100	0.05004	F1	mg/Kg		50	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-10875-A-48-E MSD
Matrix: Solid
Analysis Batch: 18462

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 18361

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.100	0.03234	F1	mg/Kg		32	70 - 130	27	35
Toluene	<0.00200	U F1	0.100	0.03586	F1	mg/Kg		36	70 - 130	20	35
Ethylbenzene	<0.00200	U F1	0.100	0.03495	F1	mg/Kg		35	70 - 130	27	35
m-Xylene & p-Xylene	<0.00401	U F1	0.201	0.07455	F1	mg/Kg		37	70 - 130	26	35
o-Xylene	<0.00200	U F1	0.100	0.04331	F1	mg/Kg		43	70 - 130	14	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-18405/1-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18405

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		02/02/22 14:28	02/05/22 11:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 11:54	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/02/22 14:28	02/05/22 11:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*02/02/22 14:28*	*02/05/22 11:54*	*1*
o-Terphenyl	*97*		*70 - 130*	*02/02/22 14:28*	*02/05/22 11:54*	*1*

Lab Sample ID: LCS 880-18405/2-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18405

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1218		mg/Kg		122	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1331	*+	mg/Kg		133	70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 02

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

Lab Sample ID: LCS 880-18405/2-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18405

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: LCSD 880-18405/3-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18405

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1098		mg/Kg		110	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	1165		mg/Kg		117	70 - 130	13	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: 880-10891-A-21-D MS
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18405

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	996.6		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U *+ F1 F2	1000	1008		mg/Kg		101	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	72		70 - 130
o-Terphenyl	75		70 - 130

Lab Sample ID: 880-10891-A-21-E MSD
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 18405

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1148		mg/Kg		112	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	<50.0	U *+ F1 F2	998	1328	F1 F2	mg/Kg		133	70 - 130	27	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	96		70 - 130
o-Terphenyl	86		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-18363/1-A
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/04/22 22:17	1

Lab Sample ID: LCS 880-18363/2-A
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	246.6		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-18363/3-A
Matrix: Solid
Analysis Batch: 18607

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	269.2		mg/Kg		108	90 - 110	9	20

Lab Sample ID: 890-1896-A-1-B MS
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	114	F1	248	399.7	F1	mg/Kg		116	90 - 110		

Lab Sample ID: 890-1896-A-1-B MSD
Matrix: Solid
Analysis Batch: 18607

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	114	F1	248	343.9		mg/Kg		93	90 - 110	15	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 02

GC VOA

Prep Batch: 18361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1897-1	SS07	Total/NA	Solid	5035	
MB 880-18361/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-18361/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-18361/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-10875-A-48-D MS	Matrix Spike	Total/NA	Solid	5035	
880-10875-A-48-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 18462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1897-1	SS07	Total/NA	Solid	8021B	18361
MB 880-18361/5-A	Method Blank	Total/NA	Solid	8021B	18361
LCS 880-18361/1-A	Lab Control Sample	Total/NA	Solid	8021B	18361
LCSD 880-18361/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	18361
880-10875-A-48-D MS	Matrix Spike	Total/NA	Solid	8021B	18361
880-10875-A-48-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	18361

Analysis Batch: 18599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1897-1	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 18405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1897-1	SS07	Total/NA	Solid	8015NM Prep	
MB 880-18405/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-18405/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-18405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-10891-A-21-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-10891-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 18476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1897-1	SS07	Total/NA	Solid	8015 NM	

Analysis Batch: 18620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1897-1	SS07	Total/NA	Solid	8015B NM	18405
MB 880-18405/1-A	Method Blank	Total/NA	Solid	8015B NM	18405
LCS 880-18405/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	18405
LCSD 880-18405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	18405
880-10891-A-21-D MS	Matrix Spike	Total/NA	Solid	8015B NM	18405
880-10891-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	18405

HPLC/IC

Leach Batch: 18363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1897-1	SS07	Soluble	Solid	DI Leach	
MB 880-18363/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-18363/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-18363/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 02

HPLC/IC (Continued)

Leach Batch: 18363 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1896-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1896-A-1-B MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 18607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1897-1	SS07	Soluble	Solid	300.0	18363
MB 880-18363/1-A	Method Blank	Soluble	Solid	300.0	18363
LCS 880-18363/2-A	Lab Control Sample	Soluble	Solid	300.0	18363
LCSD 880-18363/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	18363
890-1896-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	18363
890-1896-A-1-B MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	18363

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 02

Client Sample ID: SS07

Date Collected: 01/31/22 10:20
Date Received: 01/31/22 16:52

Lab Sample ID: 890-1897-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			18361	02/03/22 09:00	MR	XEN MID
Total/NA	Analysis	8021B		1	18462	02/04/22 03:01	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18599	02/04/22 14:29	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	18476	02/03/22 11:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			18405	02/02/22 14:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	18620	02/05/22 16:09	AJ	XEN MID
Soluble	Leach	DI Leach			18363	02/04/22 11:52	CH	XEN MID
Soluble	Analysis	300.0		1	18607	02/05/22 00:20	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: 890-1897-1
Project/Site: PLU 13 DTD 903H SDG: TE012921034 TASK 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.
Project/Site: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 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: PLU 13 DTD 903H

Job ID: 890-1897-1
SDG: TE012921034 TASK 02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1897-1	SS07	Solid	01/31/22 10:20	01/31/22 16:52	0.5

Chain of Custody

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)

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Work Order No: _____

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:	720-384-7365	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:	PLU 13 DTD 903H	Turn Around	
Project Number:	TE012921034 Task 02	Routine	✓
P.O. Number:		Rush:	5 days
Sampler's Name:	Mercy Rotich.	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	2.4 / 2.2	Thermometer ID	TNM-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)	Sample Comments
SS07	S	01/31/22	10:20	0.6'	1	X	X	X	Discrete

890-1897 Chain of Custody

Work Order Notes

CC: 1665081001
API:30-015-45845

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	[signature]	[signature]	1.31.22 1653			
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1897-1
SDG Number: TE012921034 TASK 02

Login Number: 1897
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: 890-1897-1
SDG Number: TE012921034 TASK 02

Login Number: 1897
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 02/02/22 01:36 PM

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.	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	

District I
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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 118793

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 118793
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAPP2108540573 PLU 13 DTD 903H, thank you. This closure is approved.	10/27/2022