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	NAPP2126639352
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		

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2126639352
District RP	
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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.

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

Printed Name: _____ Title: _____

Signature: Adrian Bates Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Ramona Marcus Date: 9/23/2021

NAPP2126639352

Location:	**PLU 78 B SWD**	
Spill Date:	**9/9/2021**	
Area 1		
Approximate Area =	1883.00	sq. ft.
Average Saturation (or depth) of spill =	4.00	inches
Average Porosity Factor =	0.20	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	62.36	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**62.36**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**40.00**	**bbls**

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2126639352
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2126639352
District RP	
Facility ID	
Application ID	

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

Printed Name: ___Adrian Baker_____ Title: ____Environmental Coordinator_____

Signature:_____Adrian Baker_____ Date: ___06/06/2022_____

email: ___adrian.baker@exxonmobil.com_____ Telephone: ____432-236-3808_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2126639352
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

☒ Detailed description of proposed remediation technique
☒ Scaled sitemap with GPS coordinates showing delineation points
☒ Estimated volume of material to be remediated
☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: ____Adrian Baker_____ Title: ____Environmental Coordinator_____

Signature: _____Adrian Baker_____ Date: ___06/06/2022_____

email: __adrian.baker@exxonmobil.com_____ Telephone: ___432-236-3808_____

OCD Only

Received by: _____ Date: _____

☒ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Jennifer Nobui Date: 08/22/2022

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2126639352
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

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

Printed Name: __ Garrett Green_____ Title: _SSHE Coordinator_____

Signature: ____ _____ Date: __11/09/2022_____

email: __garrett.green@exxonmobil.com_____ Telephone: ___575-200-0729

OCD Only

Received by: Jocelyn Harimon Date: 11/18/2022

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☒ Deferral Approved

Signature: Jennifer Nobui Date: 12/16/2022

ENSOLUM

November 18, 2022

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Deferral Request
PLU 78 B SWD
Incident Number NAPP2126639352
Eddy County, New Mexico

To Whom it May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this *Deferral Request* to document the site assessment, delineation and soil sampling activities completed at the PLU 78 B Saltwater Disposal (SWD) (Site). The purpose of the remediation activities was to address impacted soil resulting from a release of produced water at the Site by safely excavating impacted soil to the extent possible based on the Site conditions and as allowed by XTO safety policy. Based additional remedial activites completed as outlined in an approved work plan, XTO is submitting this *Deferral Request*, describing site assessment and excavation activities that have occurred and requesting deferral of final remediation for Incident Numbers NAPP2126639352 until the Site is reconstructed, and/or the well pad is abandoned.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 25, Township 24 South, Range 30 East, in Eddy County, New Mexico (32.19442°N, 103.82817° W) and is associated with oil and gas exploration and production disposal operations on Federal Land managed by the Bureau of Land Management (BLM). Figure 1 depicts the site location on a topographic map.

On September 9, 2021, corrosion caused a leak on a flange connecting the ball valve to a stainless-steel pipeline, which resulted in the release of 62.36 barrels (bbls) of produced water onto the well pad and into the adjacent pasture. A vacuum truck was immediately dispatched to the Site to recover the free-standing fluids; approximately 40 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) via email on September 10, 2021 and submitted a Release Notification Form C-141 (Form C-141) on September 23, 2021. The release was assigned Incident Number NAPP2126639352. Site assessment and delineation of the release was completed in October 2021.

In October 2021 and November 2021, impacted soil was removed from the release area on pad; excavation samples collected from the on-pad excavation were compliant with the Site Closure Criteria. Impacted soil was removed from the top 4 feet of the pasture release areas to the maximum extent possible while complying with XTO safety policy regarding excavation within 2 feet of active pipelines. A hydro-vacuum (hydrovac) and hand shovels were used to remove as much soil as possible without disturbing the multiple surface and subsurface active electric lines, high-pressure gas lines, and fiberglass water lines within the release extent. Approximately 25 cubic yards of chloride-impacted soil remained in place immediately surrounding or beneath active pipelines. Following removal of the soil to

the maximum extent possible, and a review of laboratory analytical results XTO submitted a *Remediation Work Plan (Work Plan)* on June 6, 2022 and proposed the following remediation activities:

- Continued Excavation: XTO will proceed with vertical excavation of the chloride impacted soil identified in floor samples FS09, FS10, and FS12 to below the Site Closure Criteria. Following removal of the impacted soil, 5-point composite samples will be collected at least every 200 square feet from the floor of the excavations, effectively replacing the failing samples. The impacted soil will be disposed of at a licensed disposal facility.

- Additional Delineation: Delineation of impacted soil remaining in place beneath and within 2 feet of active pipelines is complete, except near the water line near sample SW06. XTO will complete delineation of the chloride impacted soil along the water line north of sidewall sample SW06 to below the reclamation standards in the top four feet.

- All new excavation and delineation samples will be placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples will be transported at or below 4 degrees Celsius (°C) under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of chloride following EPA Method 300.0.

The *Work Plan* was approved by NMOCD on August 22, 2022 via email with the following condition:

- *Please submit a Deferral Request after implementing the Remediation Plan.*

What follows is a description of the work completed in compliance with the approved *Work Plan*.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

As documented in the *Work Plan*, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

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

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH applies to the top 4 feet of the pasture area that was impacted by the release.

DELINEATION AND EXCAVATION ACTIVITIES

On October 10, 2022 Ensolum personnel were at the Site to complete excavation and delineation activities as detailed in the *Work Plan.* The floor of the excavation in the areas of FS09, FS10, and FS12 were excavated to a maximum of 4.5 feet bgs. Confirmation floor samples, FS09A, FS10A, and FS12A were retaken at depths ranging from 4 feet bgs to 4.5 feet bgs. The samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The soil samples were handled as proposed in the *Work Plan* and delivered to Eurofins in Carlsbad, New Mexico.

Following the excavation, a delineation pothole, PH01 was advanced just north of SW06 in order to delineate the soil remaining in place along the active pipeline (Appendix A). The delineation pothole was advanced via backhoe to a maximum depth of 4 feet bgs. Discrete soil samples were collected from the pothole at depths ranging from 0.5 feet bgs to 4 feet bgs. Soil from the pothole was field screened for VOCs and chloride. Field screening results and observations were logged on a lithologic/soil sampling log, which is included in Appendix B. The delineation soil samples were handled and analyzed as described above. The delineation soil sample locations are depicted on Figure 2. The additional excavation measured approximately 600 square feet. A total of approximately 15 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Hobbs, New Mexico

ANALYTICAL RESULTS

Laboratory analytical results for excavation floor samples FS09A, FS10A and FS12A indicated all COC concentrations were compliant with the Closure Criteria for samples collected deeper than 4 feet bgs. Laboratory analytical results for the delineation soil samples collected from pothole PH01 indicated that all COC concentrations were compliant with the Closure Criteria and compliant with the reclamation requirement. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix C. Notifications of sampling events are included as Appendix D.

DEFERRAL REQUEST

Impacted soil was removed from the top four feet to comply with the reclamation requirement to the maximum extent possible near active surface and subsurface pipelines, as well as overhead lines and utility poles. The active pipelines are located immediately adjacent to the PLU 78 B SWD well pad in an area with significant belowground and aboveground hazards. Delineation of the remaining impacted soil beneath and near the active pipelines and overhead lines is complete. XTO requests to address the remaining estimated 25 cubic yards of chloride impacted soil at the time of facility abandonment and removal of the active pipelines. The area of soil remaining in place is depicted on Figure 3. XTO does not believe deferment will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater was determined to be greater than 100 feet bgs, the majority of the impacted soil was removed, and the residual impacted soil remaining in place is limited in areal and vertical extent.

XTO has completed the actions approved in the *Work Plan* and is submitting this deferral request as a condition of approval. XTO requests deferral of final remediation for Incident Number NAPP2126639352 until final reclamation of the well pad or major construction, whichever comes first.

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

Sincerely,
Ensolum, LLC

Anita Thapalia, Ph.D., P.G.
Project Geologist

Ashley L. Ager, M.S., P.G.
Principal

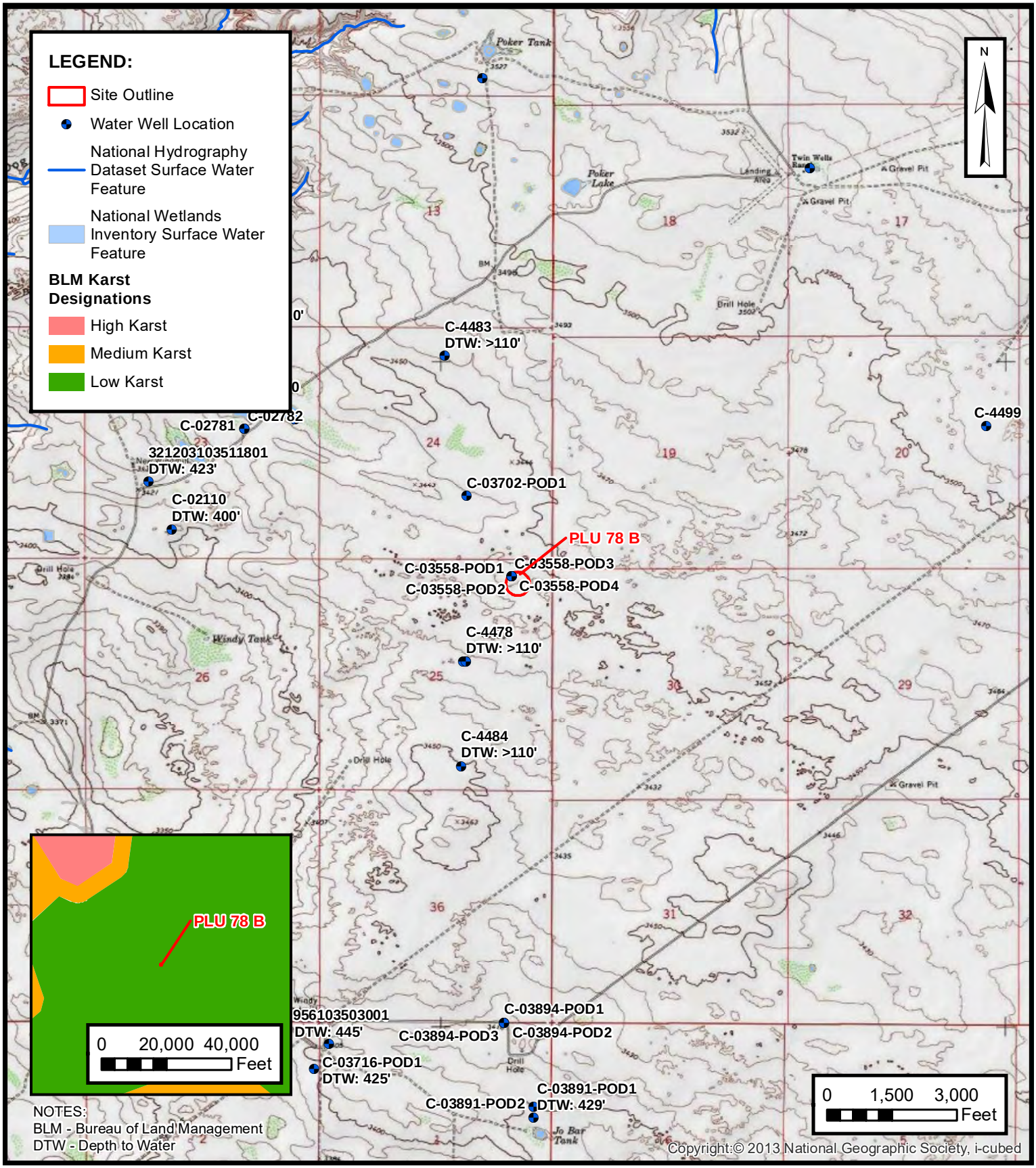
cc: Garrett Green, XTO
Shelby Pennington, XTO
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Soil Sample Locations
Figure 3	Deferral Map
Table 1	Soil Sample Analytical Results
Appendix A	Photographic Log
Appendix B	Lithologic / Soil Sampling Logs
Appendix C	Laboratory Analytical Reports and Chain of Custody Documentation
Appendix D	NMOCD Notifications

ENSOLUM

FIGURES

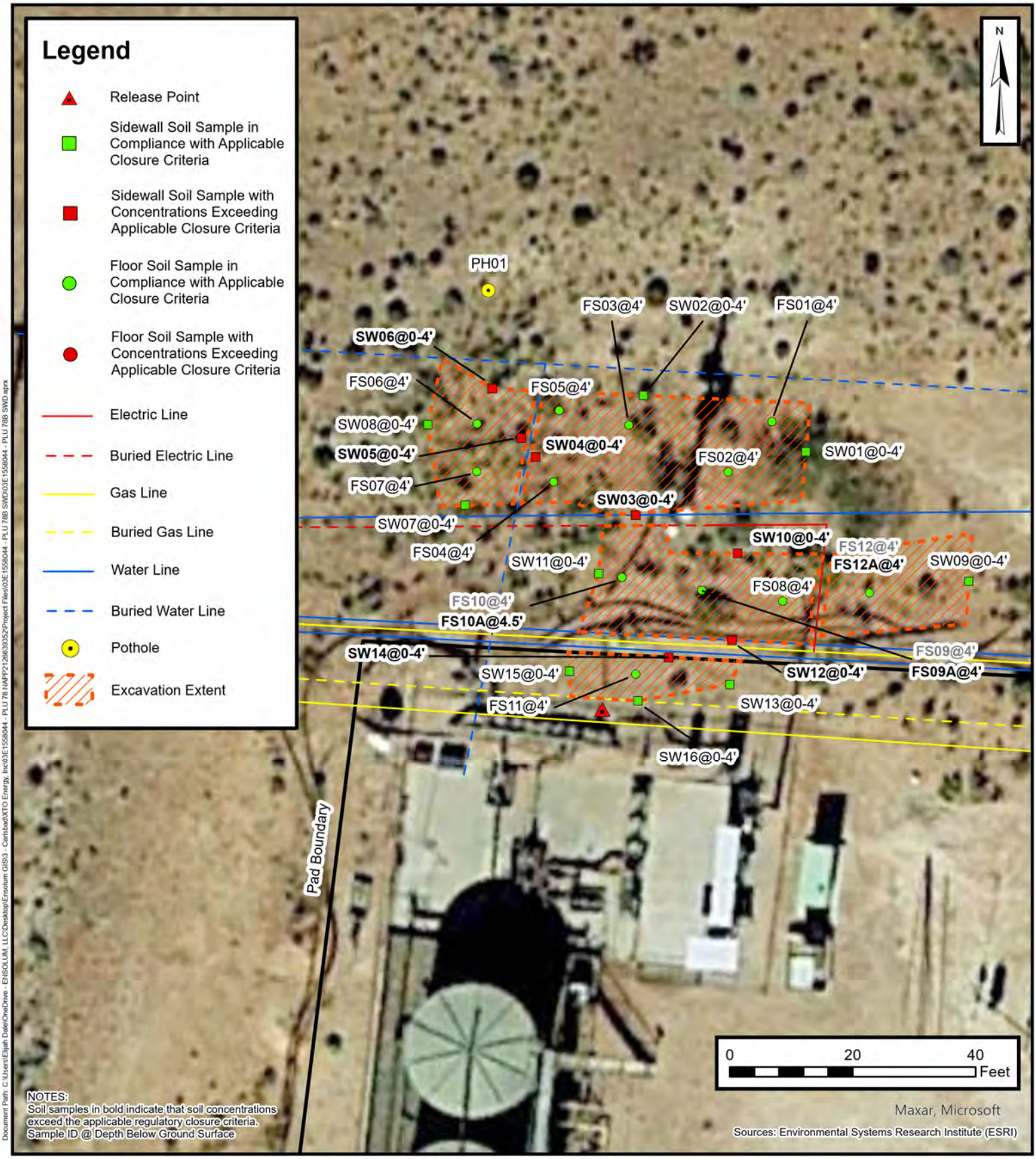


ENSOLUM
Environmental & Hydrogeologic Consultants

SITE RECEPTOR MAP

XTO ENERGY, INC
PLU 78 B SWD
NAPP2126639352
Unit A, Sec 23, T24S, R30E
Eddy County, New Mexico

FIGURE
1



NOTES:
Soil samples in bold indicate that soil concentrations exceed the applicable regulatory closure criteria.
Sample ID @ Depth Below Ground Surface

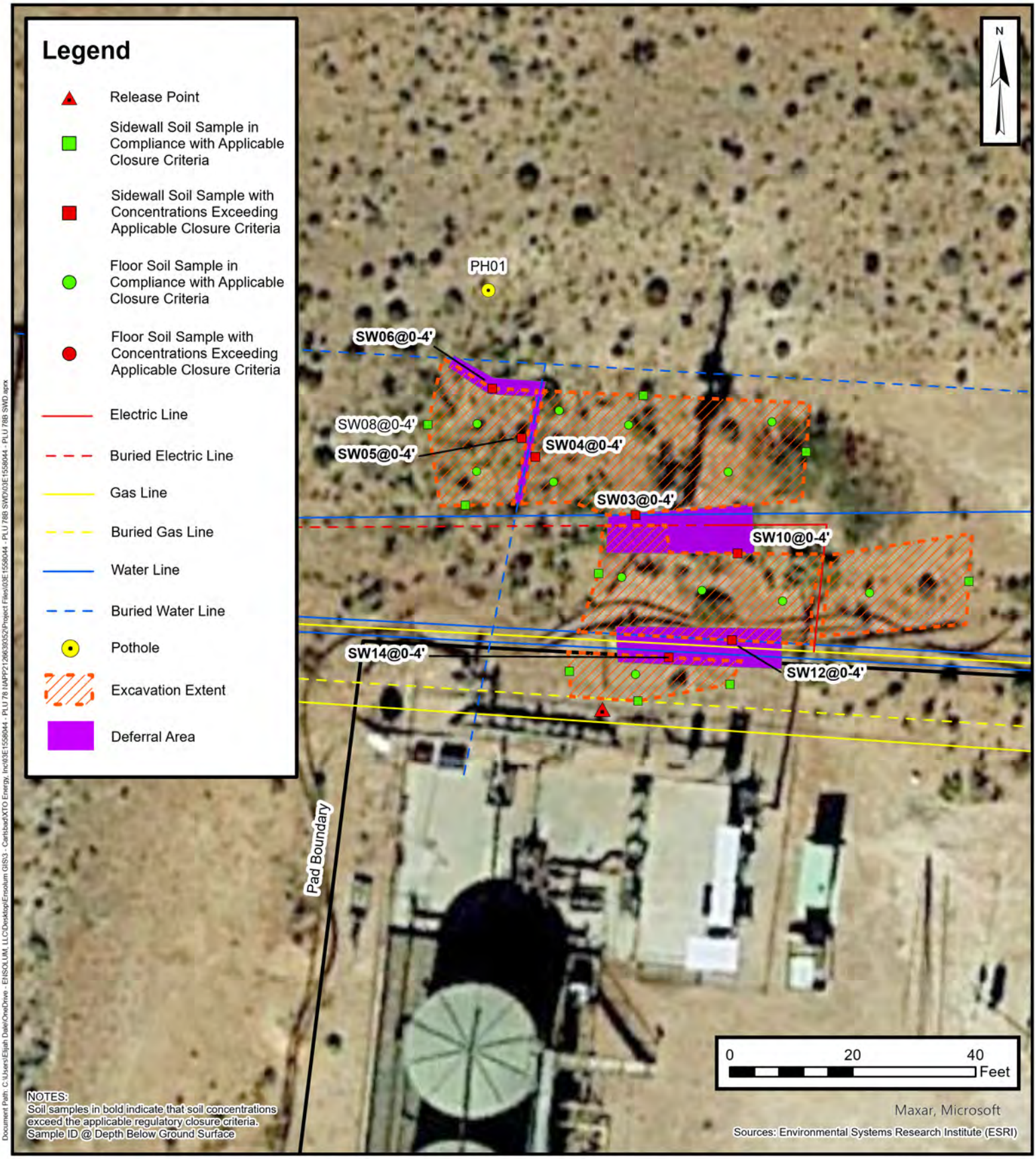
Document Path: C:\Users\Elijah Dale\OneDrive - ENSOLUM, LLC\Desktop\Ensolum GIS\3 - Carlsbad\XTO Energy, Inc\03E-1558044 - PLU 78 UA\PP2126639352\Project Files\03E-1558044 - PLU 78B SWD\03E1558044 - PLU 78B SWD.aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Soil Sample Locations

XTO Energy Inc.
PLU 78B SWD
NAPP2126639352
Unit A, Sec 23, T24S, R30E
Eddy County, New Mexico

FIGURE
2



Document Path: C:\Users\Elijah Dale\OneDrive - ENSOLUM, LLC\Desktop\Ensolum GIS\3 - Carlsbad\XTO Energy, Inc\03E1558044 - PLU 78 UA\PP2126639352\Project Files\03E1558044 - PLU 78B SWD\03E1558044 - PLU 78B SWD.aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Deferral Map

XTO Energy Inc.
PLU 78B SWD
NAPP2126639352
Unit A, Sec 23, T24S, R30E
Eddy County, New Mexico

FIGURE
3

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TABLES

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 78 B SWD
XTO Energy, LLC
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delination Soil Samples										
PH01	10/10/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	15.2
PH01A	10/10/2022	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	24.6
PH01B	10/10/2022	4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	30.1
BH01	10/19/2021	1	<0.00200	<0.00399	<49.9	65.1	<49.9	65.1	65.1	9,780
BH01A	10/19/2021	3	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	6,000
BH01B	10/19/2021	4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	12,000
BH02	10/19/2021	3	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	14,100
BH02A	10/19/2021	4	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	10,300
BH03	10/19/2021	3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	10,700
BH03A	10/19/2021	4	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	7,690
Confirmation Floor Soil Samples										
FS01	11/10/2021	4	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	700
FS02	11/10/2021	4	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	709
FS03	11/10/2021	4	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	14,100
FS04	11/10/2021	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	9,540
FS05	11/10/2021	4	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	740
FS06	11/10/2021	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	635
FS07	11/10/2021	4	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	888
FS08	11/10/2021	4	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	7,570
~~FS09~~	~~11/10/2021~~	~~4~~	~~<0.00199~~	~~<0.00398~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~**20,400**~~
FS09A	10/10/2022	4	NA	NA	NA	NA	NA	NA	NA	1,040
~~FS10~~	~~11/10/2021~~	~~4~~	~~<0.00200~~	~~<0.00399~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~**22,600**~~
FS10A	10/10/2022	4.5	NA	NA	NA	NA	NA	NA	NA	6,280
FS11	11/10/2021	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	13,500
~~FS12~~	~~11/10/2021~~	~~4~~	~~<0.00198~~	~~<0.00396~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~<49.9~~	~~**21,300**~~
FS12A	10/10/2022	4	NA	NA	NA	NA	NA	NA	NA	123

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU 78 B SWD
XTO Energy, LLC
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Confirmation Sidewall Soil Samples										
SW01	10/27/2021	0 - 4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	<4.98
SW02	10/27/2021	0 - 4	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	17.1
SW03	10/27/2021	0 - 4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	**5,970**
SW04	10/27/2021	0 - 4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	**5,900**
SW05	10/27/2021	0 - 4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	**7,210**
SW06	10/27/2021	0 - 4	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	**6,420**
SW07	10/27/2021	0 - 4	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	20.9
SW09	10/27/2021	0 - 4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	338
SW10	10/27/2021	0 - 4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	**6,410**
SW11	10/27/2021	0 - 4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	96.4
SW12	10/27/2021	0 - 4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	**3,810**
SW13	10/27/2021	0 - 4	<0.00198	<0.00396	<50.0	229	<50.0	229	229	10,900
SW14	10/27/2021	0 - 4	<0.00199	<0.00398	<49.8	61.9	<49.8	61.9	61.9	**6,550**
SW15	10/27/2021	0 - 4	<0.00198	<0.00397	<50.0	75.6	<50.0	75.6	75.6	10,700
SW16	10/27/2022	0 - 4	<0.00200	<0.00400	<49.8	74.3	<49.8	74.3	74.3	10,400

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Concentrations in **bold** exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.
~~Grey~~ text represents samples that have been excavated

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
NA: Not Analyzed

ENSOLUM

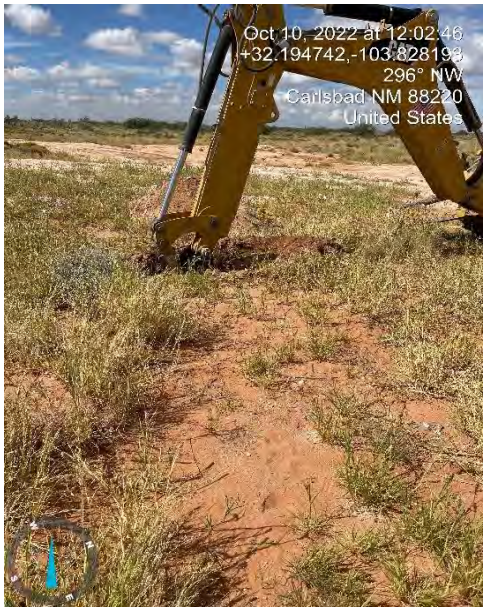
APPENDIX A

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc.
PLU 78 B SWD
Incident No. NAPP2126639352

Photograph: 1 Date: October 10, 2022
Description: Photo of excavation extent.
View: South



Photograph: 2 Date: October 10, 2022
Description: Photo of Potholing event.
View: Northwest

ENSOLUM

APPENDIX B

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: **BH01**	Date: **10/19/2021**
	Site Name: **PLU 78 B SWD**	
	Incident Number: **NAPP2126639352**	
	Job Number: 03E1558044	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: EL	Method: **Hand Auger**
Coordinates: **32.194448, -103.828152**	Hole Diameter: 2"	Total Depth: **4'**

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
M	14,342	0.0	Y	BH01	1	1	SM	SAND, silty, poorly graded, fine, brown, trace clay, low plasicity, non-cohesive, trace caliche gravel, odor present.
M	6,675	1.1	N			2	SC	SAND, silty, poorly graded, fine, reddish brown, some clay, low plasicity, cohesive, no odor.
M	9,772	0.0	N	BH01A	3	3	SC	SAA
M	14,342	0.0	N	BH01B	4	4	SC	SAA, abundant clay, moderate plasicity.

TD @ 4 feet bgs

ENSOLUM

	Sample Name: **BH02**	Date: **10/19/2021**
	Site Name: **PLU 78 B SWD**	
	Incident Number: **NAPP2126639352**	
	Job Number: 03E1558044	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: EL	Method: **Hand Auger**
Coordinates: **32.194481, -103.828053**	Hole Diameter: 2"	Total Depth: **4'**

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
M	6,171	0.0	N			1	SC	SAND, silty, poorly graded, fine, reddish brown, some clay, low plasticity, cohesive, no odor.
M	14,342	0.1	N			2	SC	SAA, abundant clay, moderate plasticity.
M	14,342	0.0	N	BH02	3	3	SC	SAA
M	13,255	0.0	N	BH02A	4	4	SC	SAA

TD @ 4 feet bgs

ENSOLUM

	Sample Name: **BH03**	Date: **10/19/2021**
	Site Name: **PLU 78 B SWD**	
	Incident Number: **NAPP2126639352**	
	Job Number: 03E1558044	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: EL	Method: **Hand Auger**
Coordinates: **32.194564, -103.828204**	Hole Diameter: 2"	Total Depth: **4'**

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
M	7,213	0.0	N			1	SC	SAND, silty, poorly graded, fine, reddish brown, some clay, low plasticity, cohesive, no odor.
M	6,171	0.0	N			2	SC	SAA
M	13,255	0.0	N	BH03	3	3	SC	SAA, abundant clay, moderate plasticity.
M	10,539	0.0	N	BH03A	4	4	SC	SAA

TD @ 4 feet bgs

ENSOLUM

	Sample Name: **PH01**	Date: **10/10/2021**
	Site Name: **PLU 78 B SWD**	
	Incident Number: **NAPP2126639352**	
	Job Number: 03E1558044	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR	Method: **Backhoe**
Coordinates: **32.19442, -103.82817**	Hole Diameter: 1-2'	Total Depth: **4'**

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. No correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	<168	0.0	N	PH01	0.5	0	SP	SAND, red, no staining, no odor.
						1		
D	<168	0.0	N	PH01A	2	2	SP	SAND, red/ brown.
						3		
D	<168	0.1	N	PH01B	4	4	SP	SAND, brown.

TD @ 4 feet bgs

ENSOLUM

APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-1450-1
Laboratory Sample Delivery Group: 31403236.020.0129
Client Project/Site: PLU 78 B

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

Attn: Dan Moir

JKramer

Authorized for release by:
10/28/2021 3:12:47 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 78 B

Laboratory Job ID: 890-1450-1
SDG: 31403236.020.0129

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1450-1
Project/Site: PLU 78 B SDG: 31403236.020.0129

Qualifiers

GC VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

Job ID: 890-1450-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1450-1

Receipt
The samples were received on 10/19/2021 3:54 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-10011 and analytical batch 880-10332 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: BH01 (890-1450-1). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

Client Sample ID: BH01

Lab Sample ID: 890-1450-1
Matrix: Solid
Date Collected: 10/19/21 10:34
Date Received: 10/19/21 15:54
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:16	10/24/21 18:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:16	10/24/21 18:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:16	10/24/21 18:49	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/20/21 14:16	10/24/21 18:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:16	10/24/21 18:49	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/20/21 14:16	10/24/21 18:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*10/20/21 14:16*	*10/24/21 18:49*	*1*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*	*10/20/21 14:16*	*10/24/21 18:49*	*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			10/26/21 15:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**65.1**		49.9		mg/Kg			10/27/21 11:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/27/21 13:40	10/27/21 20:29	1
Diesel Range Organics (Over C10-C28)	**65.1**		49.9		mg/Kg		10/27/21 13:40	10/27/21 20:29	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/27/21 13:40	10/27/21 20:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*126*		*70 - 130*	*10/27/21 13:40*	*10/27/21 20:29*	*1*
o-Terphenyl	*140*	*S1+*	*70 - 130*	*10/27/21 13:40*	*10/27/21 20:29*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9780**		49.7		mg/Kg			10/25/21 19:50	10

Client Sample ID: BH01A

Lab Sample ID: 890-1450-2
Matrix: Solid
Date Collected: 10/19/21 10:47
Date Received: 10/19/21 15:54
Sample Depth: 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		10/20/21 14:16	10/24/21 20:13	1
Toluene	<0.00198	U	0.00198		mg/Kg		10/20/21 14:16	10/24/21 20:13	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		10/20/21 14:16	10/24/21 20:13	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		10/20/21 14:16	10/24/21 20:13	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		10/20/21 14:16	10/24/21 20:13	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		10/20/21 14:16	10/24/21 20:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*10/20/21 14:16*	*10/24/21 20:13*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

Client Sample ID: BH01A

Lab Sample ID: 890-1450-2
Matrix: Solid
Date Collected: 10/19/21 10:47
Date Received: 10/19/21 15:54
Sample Depth: 3

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*10/20/21 14:16*	*10/24/21 20:13*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			10/26/21 15:12	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			10/27/21 11:09	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		10/27/21 13:40	10/27/21 21:29	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		10/27/21 13:40	10/27/21 21:29	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/27/21 13:40	10/27/21 21:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*108*		*70 - 130*	*10/27/21 13:40*	*10/27/21 21:29*	*1*
o-Terphenyl	*128*		*70 - 130*	*10/27/21 13:40*	*10/27/21 21:29*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6000**		49.9	mg/Kg			10/25/21 19:57	10

Client Sample ID: BH01B

Lab Sample ID: 890-1450-3
Matrix: Solid
Date Collected: 10/19/21 10:54
Date Received: 10/19/21 15:54
Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		10/20/21 14:16	10/24/21 20:34	1
Toluene	<0.00201	U	0.00201	mg/Kg		10/20/21 14:16	10/24/21 20:34	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		10/20/21 14:16	10/24/21 20:34	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		10/20/21 14:16	10/24/21 20:34	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		10/20/21 14:16	10/24/21 20:34	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		10/20/21 14:16	10/24/21 20:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*10/20/21 14:16*	*10/24/21 20:34*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*10/20/21 14:16*	*10/24/21 20:34*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			10/26/21 15:12	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			10/27/21 11:09	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

Client Sample ID: BH01B

Lab Sample ID: 890-1450-3
Matrix: Solid
Date Collected: 10/19/21 10:54
Date Received: 10/19/21 15:54
Sample Depth: 4

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		10/27/21 13:40	10/27/21 21:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/27/21 13:40	10/27/21 21:49	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/27/21 13:40	10/27/21 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*10/27/21 13:40*	*10/27/21 21:49*	*1*
o-Terphenyl	*115*		*70 - 130*	*10/27/21 13:40*	*10/27/21 21:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12000**		99.0		mg/Kg			10/25/21 22:04	20

Client Sample ID: BH02

Lab Sample ID: 890-1450-4
Matrix: Solid
Date Collected: 10/19/21 11:25
Date Received: 10/19/21 15:54
Sample Depth: 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:16	10/24/21 20:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:16	10/24/21 20:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:16	10/24/21 20:54	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		10/20/21 14:16	10/24/21 20:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:16	10/24/21 20:54	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		10/20/21 14:16	10/24/21 20:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*10/20/21 14:16*	*10/24/21 20:54*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*10/20/21 14:16*	*10/24/21 20:54*	*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			10/26/21 15:12	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			10/27/21 11:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/27/21 13:40	10/27/21 22:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/27/21 13:40	10/27/21 22:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/27/21 13:40	10/27/21 22:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*10/27/21 13:40*	*10/27/21 22:10*	*1*
o-Terphenyl	*126*		*70 - 130*	*10/27/21 13:40*	*10/27/21 22:10*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

Client Sample ID: BH02

Date Collected: 10/19/21 11:25
Date Received: 10/19/21 15:54
Sample Depth: 3

Lab Sample ID: 890-1450-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14100		101		mg/Kg			10/25/21 22:22	20

Client Sample ID: BH02A

Date Collected: 10/19/21 11:30
Date Received: 10/19/21 15:54
Sample Depth: 4

Lab Sample ID: 890-1450-5
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:16	10/24/21 21:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:16	10/24/21 21:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:16	10/24/21 21:15	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		10/20/21 14:16	10/24/21 21:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:16	10/24/21 21:15	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		10/20/21 14:16	10/24/21 21:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*10/20/21 14:16*	*10/24/21 21:15*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*10/20/21 14:16*	*10/24/21 21:15*	*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			10/26/21 15:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			10/27/21 11:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		10/27/21 13:40	10/27/21 22:31	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		10/27/21 13:40	10/27/21 22:31	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/27/21 13:40	10/27/21 22:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*10/27/21 13:40*	*10/27/21 22:31*	*1*
o-Terphenyl	*116*		*70 - 130*	*10/27/21 13:40*	*10/27/21 22:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10300		49.8		mg/Kg			10/25/21 22:28	10

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

Client Sample ID: BH03

Date Collected: 10/19/21 11:59
Date Received: 10/19/21 15:54
Sample Depth: 3

Lab Sample ID: 890-1450-6
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/20/21 14:16	10/24/21 21:36	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/20/21 14:16	10/24/21 21:36	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/20/21 14:16	10/24/21 21:36	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/20/21 14:16	10/24/21 21:36	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/20/21 14:16	10/24/21 21:36	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/20/21 14:16	10/24/21 21:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*10/20/21 14:16*	*10/24/21 21:36*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*10/20/21 14:16*	*10/24/21 21:36*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/26/21 15:12	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			10/27/21 11:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/27/21 13:40	10/27/21 22:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/27/21 13:40	10/27/21 22:51	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/27/21 13:40	10/27/21 22:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*10/27/21 13:40*	*10/27/21 22:51*	*1*
o-Terphenyl	*115*		*70 - 130*	*10/27/21 13:40*	*10/27/21 22:51*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10700**		49.5		mg/Kg			10/25/21 22:34	10

Client Sample ID: BH03A

Date Collected: 10/19/21 12:05
Date Received: 10/19/21 15:54
Sample Depth: 4

Lab Sample ID: 890-1450-7
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/20/21 14:16	10/24/21 21:57	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/20/21 14:16	10/24/21 21:57	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/20/21 14:16	10/24/21 21:57	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/20/21 14:16	10/24/21 21:57	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/20/21 14:16	10/24/21 21:57	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/20/21 14:16	10/24/21 21:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*10/20/21 14:16*	*10/24/21 21:57*	*1*

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Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

Client Sample ID: BH03A
Date Collected: 10/19/21 12:05
Date Received: 10/19/21 15:54
Sample Depth: 4

Lab Sample ID: 890-1450-7
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*10/20/21 14:16*	*10/24/21 21:57*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/26/21 15:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			10/27/21 11:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		10/27/21 13:40	10/27/21 23:11	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		10/27/21 13:40	10/27/21 23:11	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/27/21 13:40	10/27/21 23:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*100*		*70 - 130*	*10/27/21 13:40*	*10/27/21 23:11*	*1*
o-Terphenyl	*115*		*70 - 130*	*10/27/21 13:40*	*10/27/21 23:11*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7690**		50.0		mg/Kg			10/25/21 22:39	10

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-7292-A-1-B MS	Matrix Spike	8 S1-	127
880-7292-A-1-C MSD	Matrix Spike Duplicate	21 S1-	0.006 S1-
890-1450-1	BH01	126	123
890-1450-2	BH01A	128	111
890-1450-3	BH01B	88	108
890-1450-4	BH02	89	104
890-1450-5	BH02A	90	107
890-1450-6	BH03	106	105
890-1450-7	BH03A	101	107
LCS 880-10011/1-A	Lab Control Sample	90	105
LCSD 880-10011/2-A	Lab Control Sample Dup	93	101
MB 880-10009/5-A	Method Blank	119	99
MB 880-10011/5-A	Method Blank	107	107

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-1450-1	BH01	126	140 S1+
890-1450-1 MS	BH01	111	113
890-1450-1 MSD	BH01	127	129
890-1450-2	BH01A	108	128
890-1450-3	BH01B	102	115
890-1450-4	BH02	112	126
890-1450-5	BH02A	99	116
890-1450-6	BH03	100	115
890-1450-7	BH03A	100	115
LCS 880-10752/2-A	Lab Control Sample	87	94
LCSD 880-10752/3-A	Lab Control Sample Dup	87	92
MB 880-10752/1-A	Method Blank	124	143 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-10009/5-A
Matrix: Solid
Analysis Batch: 10332

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10009

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:10	10/24/21 04:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:10	10/24/21 04:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:10	10/24/21 04:18	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/20/21 14:10	10/24/21 04:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:10	10/24/21 04:18	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/20/21 14:10	10/24/21 04:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*10/20/21 14:10*	*10/24/21 04:18*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*10/20/21 14:10*	*10/24/21 04:18*	*1*

Lab Sample ID: MB 880-10011/5-A
Matrix: Solid
Analysis Batch: 10332

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10011

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:16	10/24/21 15:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:16	10/24/21 15:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:16	10/24/21 15:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/20/21 14:16	10/24/21 15:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/20/21 14:16	10/24/21 15:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/20/21 14:16	10/24/21 15:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*10/20/21 14:16*	*10/24/21 15:20*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*10/20/21 14:16*	*10/24/21 15:20*	*1*

Lab Sample ID: LCS 880-10011/1-A
Matrix: Solid
Analysis Batch: 10332

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 10011

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1028		mg/Kg		103	70 - 130		
Toluene			0.100	0.07866		mg/Kg		79	70 - 130		
Ethylbenzene			0.100	0.07910		mg/Kg		79	70 - 130		
m-Xylene & p-Xylene			0.200	0.1485		mg/Kg		74	70 - 130		
o-Xylene			0.100	0.07658		mg/Kg		77	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 880-10011/2-A
Matrix: Solid
Analysis Batch: 10332

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 10011

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08414		mg/Kg		84	70 - 130	20	35

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

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

Lab Sample ID: LCSD 880-10011/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 10332 — **Prep Batch: 10011**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.07026		mg/Kg		70	70 - 130	11	35
Ethylbenzene			0.100	0.07046		mg/Kg		70	70 - 130	12	35
m-Xylene & p-Xylene			0.200	0.1400		mg/Kg		70	70 - 130	6	35
o-Xylene			0.100	0.07068		mg/Kg		71	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 880-7292-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 10332 — **Prep Batch: 10011**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0580	F1	0.101	<0.00202	U F1	mg/Kg		0	70 - 130
Toluene	0.195	F1	0.101	0.02703	F1	mg/Kg		-166	70 - 130
Ethylbenzene	0.714	E	0.101	0.006642	4	mg/Kg		-700	70 - 130
m-Xylene & p-Xylene	0.138	F1	0.202	<0.00404	U F1	mg/Kg		-68	70 - 130
o-Xylene	2.20	E	0.101	0.06402	4	mg/Kg		-2117	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*8*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*127*		*70 - 130*

Lab Sample ID: 880-7292-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 10332 — **Prep Batch: 10011**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0580	F1	0.0998	<0.00200	U F1	mg/Kg		-58	70 - 130	NC	35
Toluene	0.195	F1	0.0998	<0.00200	U F1 F2	mg/Kg		-194	70 - 130	180	35
Ethylbenzene	0.714	E	0.0998	0.05093	4 F2	mg/Kg		-664	70 - 130	154	35
m-Xylene & p-Xylene	0.138	F1	0.200	0.02850	F1 F2	mg/Kg		-55	70 - 130	183	35
o-Xylene	2.20	E	0.0998	0.1697	4 F2	mg/Kg		-2037	70 - 130	90	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*21*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*0.006*	*S1-*	*70 - 130*

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

Lab Sample ID: MB 880-10752/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 10661 — **Prep Batch: 10752**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/27/21 13:40	10/27/21 19:28	1

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QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

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

Lab Sample ID: MB 880-10752/1-A
Matrix: Solid
Analysis Batch: 10661

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10752

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/27/21 13:40	10/27/21 19:28	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/27/21 13:40	10/27/21 19:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*10/27/21 13:40*	*10/27/21 19:28*	*1*
o-Terphenyl	*143*	*S1+*	*70 - 130*	*10/27/21 13:40*	*10/27/21 19:28*	*1*

Lab Sample ID: LCS 880-10752/2-A
Matrix: Solid
Analysis Batch: 10661

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 10752

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	927.4		mg/Kg		93	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	920.2		mg/Kg		92	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*94*		*70 - 130*

Lab Sample ID: LCSD 880-10752/3-A
Matrix: Solid
Analysis Batch: 10661

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 10752

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1115		mg/Kg		111	70 - 130	18	20
Diesel Range Organics (Over C10-C28)			1000	770.0		mg/Kg		77	70 - 130	18	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

Lab Sample ID: 890-1450-1 MS
Matrix: Solid
Analysis Batch: 10661

Client Sample ID: BH01
Prep Type: Total/NA
Prep Batch: 10752

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	1192		mg/Kg		120	70 - 130		
Diesel Range Organics (Over C10-C28)	65.1		997	1095		mg/Kg		103	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*111*		*70 - 130*
o-Terphenyl	*113*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

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

Lab Sample ID: 890-1450-1 MSD
Matrix: Solid
Analysis Batch: 10661

Client Sample ID: BH01
Prep Type: Total/NA
Prep Batch: 10752

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	1221		mg/Kg		122	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	65.1		1000	1233		mg/Kg		117	70 - 130	12	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*127*		*70 - 130*
o-Terphenyl	*129*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-10300/1-A
Matrix: Solid
Analysis Batch: 10506

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			10/25/21 16:31	1

Lab Sample ID: LCS 880-10300/2-A
Matrix: Solid
Analysis Batch: 10506

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	250.8		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-10300/3-A
Matrix: Solid
Analysis Batch: 10506

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	251.0		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 890-1449-A-10-C MS
Matrix: Solid
Analysis Batch: 10506

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	181		251	443.2		mg/Kg		105	90 - 110		

Lab Sample ID: 890-1449-A-10-D MSD
Matrix: Solid
Analysis Batch: 10506

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	181		251	426.9		mg/Kg		98	90 - 110	4	20

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 880-10301/1-A
Matrix: Solid
Analysis Batch: 10621

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			10/25/21 21:11	1

Lab Sample ID: LCS 880-10301/2-A
Matrix: Solid
Analysis Batch: 10621

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	259.2		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-10301/3-A
Matrix: Solid
Analysis Batch: 10621

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	256.5		mg/Kg		103	90 - 110	1	20

Lab Sample ID: 880-7343-A-21-B MS
Matrix: Solid
Analysis Batch: 10621

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	7590		2480	10100		mg/Kg		101	90 - 110		

Lab Sample ID: 880-7343-A-21-C MSD
Matrix: Solid
Analysis Batch: 10621

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	7590		2480	10080		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

GC VOA

Prep Batch: 10009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-10009/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 10011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1450-1	BH01	Total/NA	Solid	5035	
890-1450-2	BH01A	Total/NA	Solid	5035	
890-1450-3	BH01B	Total/NA	Solid	5035	
890-1450-4	BH02	Total/NA	Solid	5035	
890-1450-5	BH02A	Total/NA	Solid	5035	
890-1450-6	BH03	Total/NA	Solid	5035	
890-1450-7	BH03A	Total/NA	Solid	5035	
MB 880-10011/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-10011/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-10011/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-7292-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-7292-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 10332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1450-1	BH01	Total/NA	Solid	8021B	10011
890-1450-2	BH01A	Total/NA	Solid	8021B	10011
890-1450-3	BH01B	Total/NA	Solid	8021B	10011
890-1450-4	BH02	Total/NA	Solid	8021B	10011
890-1450-5	BH02A	Total/NA	Solid	8021B	10011
890-1450-6	BH03	Total/NA	Solid	8021B	10011
890-1450-7	BH03A	Total/NA	Solid	8021B	10011
MB 880-10009/5-A	Method Blank	Total/NA	Solid	8021B	10009
MB 880-10011/5-A	Method Blank	Total/NA	Solid	8021B	10011
LCS 880-10011/1-A	Lab Control Sample	Total/NA	Solid	8021B	10011
LCSD 880-10011/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	10011
880-7292-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	10011
880-7292-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	10011

Analysis Batch: 10619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1450-1	BH01	Total/NA	Solid	Total BTEX	
890-1450-2	BH01A	Total/NA	Solid	Total BTEX	
890-1450-3	BH01B	Total/NA	Solid	Total BTEX	
890-1450-4	BH02	Total/NA	Solid	Total BTEX	
890-1450-5	BH02A	Total/NA	Solid	Total BTEX	
890-1450-6	BH03	Total/NA	Solid	Total BTEX	
890-1450-7	BH03A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 10661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1450-1	BH01	Total/NA	Solid	8015B NM	10752
890-1450-2	BH01A	Total/NA	Solid	8015B NM	10752
890-1450-3	BH01B	Total/NA	Solid	8015B NM	10752
890-1450-4	BH02	Total/NA	Solid	8015B NM	10752

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

GC Semi VOA (Continued)

Analysis Batch: 10661 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1450-5	BH02A	Total/NA	Solid	8015B NM	10752
890-1450-6	BH03	Total/NA	Solid	8015B NM	10752
890-1450-7	BH03A	Total/NA	Solid	8015B NM	10752
MB 880-10752/1-A	Method Blank	Total/NA	Solid	8015B NM	10752
LCS 880-10752/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	10752
LCSD 880-10752/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	10752
890-1450-1 MS	BH01	Total/NA	Solid	8015B NM	10752
890-1450-1 MSD	BH01	Total/NA	Solid	8015B NM	10752

Analysis Batch: 10676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1450-1	BH01	Total/NA	Solid	8015 NM	
890-1450-2	BH01A	Total/NA	Solid	8015 NM	
890-1450-3	BH01B	Total/NA	Solid	8015 NM	
890-1450-4	BH02	Total/NA	Solid	8015 NM	
890-1450-5	BH02A	Total/NA	Solid	8015 NM	
890-1450-6	BH03	Total/NA	Solid	8015 NM	
890-1450-7	BH03A	Total/NA	Solid	8015 NM	

Prep Batch: 10752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1450-1	BH01	Total/NA	Solid	8015NM Prep	
890-1450-2	BH01A	Total/NA	Solid	8015NM Prep	
890-1450-3	BH01B	Total/NA	Solid	8015NM Prep	
890-1450-4	BH02	Total/NA	Solid	8015NM Prep	
890-1450-5	BH02A	Total/NA	Solid	8015NM Prep	
890-1450-6	BH03	Total/NA	Solid	8015NM Prep	
890-1450-7	BH03A	Total/NA	Solid	8015NM Prep	
MB 880-10752/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-10752/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-10752/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1450-1 MS	BH01	Total/NA	Solid	8015NM Prep	
890-1450-1 MSD	BH01	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 10300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1450-1	BH01	Soluble	Solid	DI Leach	
890-1450-2	BH01A	Soluble	Solid	DI Leach	
MB 880-10300/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-10300/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-10300/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1449-A-10-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1449-A-10-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 10301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1450-3	BH01B	Soluble	Solid	DI Leach	
890-1450-4	BH02	Soluble	Solid	DI Leach	
890-1450-5	BH02A	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

HPLC/IC (Continued)

Leach Batch: 10301 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1450-6	BH03	Soluble	Solid	DI Leach	
890-1450-7	BH03A	Soluble	Solid	DI Leach	
MB 880-10301/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-10301/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-10301/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-7343-A-21-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-7343-A-21-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 10506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1450-1	BH01	Soluble	Solid	300.0	10300
890-1450-2	BH01A	Soluble	Solid	300.0	10300
MB 880-10300/1-A	Method Blank	Soluble	Solid	300.0	10300
LCS 880-10300/2-A	Lab Control Sample	Soluble	Solid	300.0	10300
LCSD 880-10300/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	10300
890-1449-A-10-C MS	Matrix Spike	Soluble	Solid	300.0	10300
890-1449-A-10-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	10300

Analysis Batch: 10621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1450-3	BH01B	Soluble	Solid	300.0	10301
890-1450-4	BH02	Soluble	Solid	300.0	10301
890-1450-5	BH02A	Soluble	Solid	300.0	10301
890-1450-6	BH03	Soluble	Solid	300.0	10301
890-1450-7	BH03A	Soluble	Solid	300.0	10301
MB 880-10301/1-A	Method Blank	Soluble	Solid	300.0	10301
LCS 880-10301/2-A	Lab Control Sample	Soluble	Solid	300.0	10301
LCSD 880-10301/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	10301
880-7343-A-21-B MS	Matrix Spike	Soluble	Solid	300.0	10301
880-7343-A-21-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	10301

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

Client Sample ID: BH01

Lab Sample ID: 890-1450-1
Matrix: Solid
Date Collected: 10/19/21 10:34
Date Received: 10/19/21 15:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			10011	10/20/21 14:16	KL	XEN MID
Total/NA	Analysis	8021B		1	10332	10/24/21 18:49	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	10619	10/26/21 15:12	KL	XEN MID
Total/NA	Analysis	8015 NM		1	10676	10/27/21 11:09	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10752	10/27/21 13:40	DM	XEN MID
Total/NA	Analysis	8015B NM		1	10661	10/27/21 20:29	AJ	XEN MID
Soluble	Leach	DI Leach			10300	10/22/21 17:44	SC	XEN MID
Soluble	Analysis	300.0		10	10506	10/25/21 19:50	CH	XEN MID

Client Sample ID: BH01A

Lab Sample ID: 890-1450-2
Matrix: Solid
Date Collected: 10/19/21 10:47
Date Received: 10/19/21 15:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			10011	10/20/21 14:16	KL	XEN MID
Total/NA	Analysis	8021B		1	10332	10/24/21 20:13	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	10619	10/26/21 15:12	KL	XEN MID
Total/NA	Analysis	8015 NM		1	10676	10/27/21 11:09	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10752	10/27/21 13:40	DM	XEN MID
Total/NA	Analysis	8015B NM		1	10661	10/27/21 21:29	AJ	XEN MID
Soluble	Leach	DI Leach			10300	10/22/21 17:44	SC	XEN MID
Soluble	Analysis	300.0		10	10506	10/25/21 19:57	CH	XEN MID

Client Sample ID: BH01B

Lab Sample ID: 890-1450-3
Matrix: Solid
Date Collected: 10/19/21 10:54
Date Received: 10/19/21 15:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			10011	10/20/21 14:16	KL	XEN MID
Total/NA	Analysis	8021B		1	10332	10/24/21 20:34	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	10619	10/26/21 15:12	KL	XEN MID
Total/NA	Analysis	8015 NM		1	10676	10/27/21 11:09	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10752	10/27/21 13:40	DM	XEN MID
Total/NA	Analysis	8015B NM		1	10661	10/27/21 21:49	AJ	XEN MID
Soluble	Leach	DI Leach			10301	10/22/21 17:46	SC	XEN MID
Soluble	Analysis	300.0		20	10621	10/25/21 22:04	CH	XEN MID

Client Sample ID: BH02

Lab Sample ID: 890-1450-4
Matrix: Solid
Date Collected: 10/19/21 11:25
Date Received: 10/19/21 15:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			10011	10/20/21 14:16	KL	XEN MID
Total/NA	Analysis	8021B		1	10332	10/24/21 20:54	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	10619	10/26/21 15:12	KL	XEN MID

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Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

Client Sample ID: BH02
Date Collected: 10/19/21 11:25
Date Received: 10/19/21 15:54

Lab Sample ID: 890-1450-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	10676	10/27/21 11:09	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10752	10/27/21 13:40	DM	XEN MID
Total/NA	Analysis	8015B NM		1	10661	10/27/21 22:10	AJ	XEN MID
Soluble	Leach	DI Leach			10301	10/22/21 17:46	SC	XEN MID
Soluble	Analysis	300.0		20	10621	10/25/21 22:22	CH	XEN MID

Client Sample ID: BH02A
Date Collected: 10/19/21 11:30
Date Received: 10/19/21 15:54

Lab Sample ID: 890-1450-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			10011	10/20/21 14:16	KL	XEN MID
Total/NA	Analysis	8021B		1	10332	10/24/21 21:15	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	10619	10/26/21 15:12	KL	XEN MID
Total/NA	Analysis	8015 NM		1	10676	10/27/21 11:09	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10752	10/27/21 13:40	DM	XEN MID
Total/NA	Analysis	8015B NM		1	10661	10/27/21 22:31	AJ	XEN MID
Soluble	Leach	DI Leach			10301	10/22/21 17:46	SC	XEN MID
Soluble	Analysis	300.0		10	10621	10/25/21 22:28	CH	XEN MID

Client Sample ID: BH03
Date Collected: 10/19/21 11:59
Date Received: 10/19/21 15:54

Lab Sample ID: 890-1450-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			10011	10/20/21 14:16	KL	XEN MID
Total/NA	Analysis	8021B		1	10332	10/24/21 21:36	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	10619	10/26/21 15:12	KL	XEN MID
Total/NA	Analysis	8015 NM		1	10676	10/27/21 11:09	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10752	10/27/21 13:40	DM	XEN MID
Total/NA	Analysis	8015B NM		1	10661	10/27/21 22:51	AJ	XEN MID
Soluble	Leach	DI Leach			10301	10/22/21 17:46	SC	XEN MID
Soluble	Analysis	300.0		10	10621	10/25/21 22:34	CH	XEN MID

Client Sample ID: BH03A
Date Collected: 10/19/21 12:05
Date Received: 10/19/21 15:54

Lab Sample ID: 890-1450-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			10011	10/20/21 14:16	KL	XEN MID
Total/NA	Analysis	8021B		1	10332	10/24/21 21:57	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	10619	10/26/21 15:12	KL	XEN MID
Total/NA	Analysis	8015 NM		1	10676	10/27/21 11:09	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10752	10/27/21 13:40	DM	XEN MID
Total/NA	Analysis	8015B NM		1	10661	10/27/21 23:11	AJ	XEN MID

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Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

Client Sample ID: BH03A
Date Collected: 10/19/21 12:05
Date Received: 10/19/21 15:54

Lab Sample ID: 890-1450-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			10301	10/22/21 17:46	SC	XEN MID
Soluble	Analysis	300.0		10	10621	10/25/21 22:39	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-1450-1
Project/Site: PLU 78 B SDG: 31403236.020.0129

Laboratory: Eurofins Xenco, 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: 890-1450-1
Project/Site: PLU 78 B SDG: 31403236.020.0129

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 Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1450-1
SDG: 31403236.020.0129

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1450-1	BH01	Solid	10/19/21 10:34	10/19/21 15:54	1
890-1450-2	BH01A	Solid	10/19/21 10:47	10/19/21 15:54	3
890-1450-3	BH01B	Solid	10/19/21 10:54	10/19/21 15:54	4
890-1450-4	BH02	Solid	10/19/21 11:25	10/19/21 15:54	3
890-1450-5	BH02A	Solid	10/19/21 11:30	10/19/21 15:54	4
890-1450-6	BH03	Solid	10/19/21 11:59	10/19/21 15:54	3
890-1450-7	BH03A	Solid	10/19/21 12:05	10/19/21 15:54	4

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)

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10/28/2021

Project Manager:	Dan Moir	Bill to: (if different)	Adrian Baker
Company Name:	WSP Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	Carlsbad, NM, 88220
Phone:	(432) 236-3849	Email:	Elliot.Lee@wsp.com, Tacoma.Morrissey@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 78 B	Turn Around	
Project Number:	31403236.020.0129	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Elliot Lee	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):	4.2 / 4.0	Thermometer ID		
Received Intact:	Yes No	T-NM-007		
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)
BH01	S	10/19/2021	10:34	1'	1	X	X	X
BH01A	S	10/19/2021	10:47	3'	1	X	X	X
BH01B	S	10/19/2021	10:54	4'	1	X	X	X
BH02	S	10/19/2021	11:25	3'	1	X	X	X
BH02A	S	10/19/2021	11:30	4'	1	X	X	X
BH03	S	10/19/2021	11:59	3'	1	X	X	X
BH03A	S	10/19/2021	12:05	4'	1	X	X	X

ANALYSIS REQUEST

890-1450 Chain of Custody

Work Order Notes

Cost Center # 1080781001
Incident # NAPP2126639352

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

Sample Comments

Sample Comments
Discrete
Discrete
Discrete
Discrete
Discrete
Discrete
Discrete
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			10/19/21 3:89	2			
3				4			
5				6			

Revised Date 051418 Rev 2018 1

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s)	COC No: 890-471 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-1450-1
Address: 1211 W Florida Ave	Due Date Requested: 10/25/2021			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: PLU 78 B	Project #: 89000004			
Site	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note.
			Preservation Code:										
BH01 (890-1450-1)	10/19/21	10 34 Mountain		Solid			X	X	X	X	X	1	
BH01A (890-1450-2)	10/19/21	10 47 Mountain		Solid			X	X	X	X	X	1	
BH01B (890-1450-3)	10/19/21	10 54 Mountain		Solid			X	X	X	X	X	1	
BH02 (890-1450-4)	10/19/21	11 25 Mountain		Solid			X	X	X	X	X	1	
BH02A (890-1450-5)	10/19/21	11 30 Mountain		Solid			X	X	X	X	X	1	
BH03 (890-1450-6)	10/19/21	11 59 Mountain		Solid			X	X	X	X	X	1	
BH03A (890-1450-7)	10/19/21	12 05 Mountain		Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

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

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

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by: Dee Cruz 10.20.21			Kramer	10 21 21	
Relinquished by:	Date/Time	Company	Received by:	Date/Time: 10:15	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 1.6/1.7

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1450-1
SDG Number: 31403236.020.0129

Login Number: 1450
List Number: 1
Creator: Olivas, Nathaniel

List Source: Eurofins Xenco, 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: 890-1450-1
SDG Number: 31403236.020.0129

Login Number: 1450
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland
List Creation: 10/21/21 10:24 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.6/1.7
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 Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-1497-1
Laboratory Sample Delivery Group: 31403236.020.0129
Client Project/Site: PLU 78B

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
11/2/2021 8:07:38 PM

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

Client: WSP USA Inc.
Project/Site: PLU 78B

Laboratory Job ID: 890-1497-1
SDG: 31403236.020.0129

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1497-1
Project/Site: PLU 78B SDG: 31403236.020.0129

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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 78B

Job ID: 890-1497-1
SDG: 31403236.020.0129

Job ID: 890-1497-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1497-1

Receipt
The samples were received on 10/28/2021 2:48 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.2°C

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

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-11018 and analytical batch 880-11030 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC
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 78B

Job ID: 890-1497-1
SDG: 31403236.020.0129

Client Sample ID: SW01

Lab Sample ID: 890-1497-1
Matrix: Solid
Date Collected: 10/27/21 14:04
Date Received: 10/28/21 14:48
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 15:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 15:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 15:29	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/01/21 08:33	11/01/21 15:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 15:29	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/01/21 08:33	11/01/21 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*11/01/21 08:33*	*11/01/21 15:29*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*11/01/21 08:33*	*11/01/21 15:29*	*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			11/01/21 14:19	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			11/01/21 12:47	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		11/01/21 08:28	11/01/21 17:39	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/01/21 08:28	11/01/21 17:39	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/01/21 08:28	11/01/21 17:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*11/01/21 08:28*	*11/01/21 17:39*	*1*
o-Terphenyl	*93*		*70 - 130*	*11/01/21 08:28*	*11/01/21 17:39*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.98	U	4.98		mg/Kg			11/01/21 15:34	1

Client Sample ID: SW02

Lab Sample ID: 890-1497-2
Matrix: Solid
Date Collected: 10/27/21 14:06
Date Received: 10/28/21 14:48
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		11/01/21 08:33	11/01/21 15:49	1
Toluene	<0.00198	U	0.00198		mg/Kg		11/01/21 08:33	11/01/21 15:49	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		11/01/21 08:33	11/01/21 15:49	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		11/01/21 08:33	11/01/21 15:49	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		11/01/21 08:33	11/01/21 15:49	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		11/01/21 08:33	11/01/21 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*11/01/21 08:33*	*11/01/21 15:49*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1497-1
SDG: 31403236.020.0129

Client Sample ID: SW02

Lab Sample ID: 890-1497-2
Matrix: Solid
Date Collected: 10/27/21 14:06
Date Received: 10/28/21 14:48
Sample Depth: 0 - 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*11/01/21 08:33*	*11/01/21 15:49*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			11/01/21 14:19	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			11/01/21 12:47	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		11/01/21 08:28	11/01/21 18:01	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/01/21 08:28	11/01/21 18:01	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/01/21 08:28	11/01/21 18:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*90*		*70 - 130*	*11/01/21 08:28*	*11/01/21 18:01*	*1*
o-Terphenyl	*104*		*70 - 130*	*11/01/21 08:28*	*11/01/21 18:01*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**17.1**		5.00		mg/Kg			11/01/21 16:51	1

Client Sample ID: SW06

Lab Sample ID: 890-1497-3
Matrix: Solid
Date Collected: 10/27/21 14:42
Date Received: 10/28/21 14:48
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 17:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 17:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 17:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/01/21 08:33	11/01/21 17:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 17:12	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/01/21 08:33	11/01/21 17:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*11/01/21 08:33*	*11/01/21 17:12*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*11/01/21 08:33*	*11/01/21 17:12*	*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			11/01/21 14:19	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			11/01/21 12:47	1

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Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1497-1
SDG: 31403236.020.0129

Client Sample ID: SW06

Lab Sample ID: 890-1497-3
Matrix: Solid
Date Collected: 10/27/21 14:42
Date Received: 10/28/21 14:48
Sample Depth: 0 - 4

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		11/01/21 08:28	11/01/21 18:22	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/01/21 08:28	11/01/21 18:22	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/01/21 08:28	11/01/21 18:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*11/01/21 08:28*	*11/01/21 18:22*	*1*
o-Terphenyl	*89*		*70 - 130*	*11/01/21 08:28*	*11/01/21 18:22*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6420**		50.4		mg/Kg			11/01/21 17:08	10

Client Sample ID: SW07

Lab Sample ID: 890-1497-4
Matrix: Solid
Date Collected: 10/27/21 08:38
Date Received: 10/28/21 14:48
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/01/21 08:33	11/01/21 17:33	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/01/21 08:33	11/01/21 17:33	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/01/21 08:33	11/01/21 17:33	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/01/21 08:33	11/01/21 17:33	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/01/21 08:33	11/01/21 17:33	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/01/21 08:33	11/01/21 17:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*11/01/21 08:33*	*11/01/21 17:33*	*1*
1,4-Difluorobenzene (Surr)	*73*		*70 - 130*	*11/01/21 08:33*	*11/01/21 17:33*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/01/21 14:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			11/01/21 12:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		11/01/21 08:28	11/01/21 18:44	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		11/01/21 08:28	11/01/21 18:44	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		11/01/21 08:28	11/01/21 18:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*81*		*70 - 130*	*11/01/21 08:28*	*11/01/21 18:44*	*1*
o-Terphenyl	*91*		*70 - 130*	*11/01/21 08:28*	*11/01/21 18:44*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1497-1
SDG: 31403236.020.0129

Client Sample ID: SW07

Lab Sample ID: 890-1497-4
Matrix: Solid
Date Collected: 10/27/21 08:38
Date Received: 10/28/21 14:48
Sample Depth: 0 - 4

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20.9		4.97		mg/Kg			11/01/21 17:14	1

Client Sample ID: SW09

Lab Sample ID: 890-1497-5
Matrix: Solid
Date Collected: 10/27/21 13:25
Date Received: 10/28/21 14:48
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/01/21 08:33	11/01/21 17:53	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/01/21 08:33	11/01/21 17:53	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/01/21 08:33	11/01/21 17:53	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/01/21 08:33	11/01/21 17:53	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/01/21 08:33	11/01/21 17:53	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/01/21 08:33	11/01/21 17:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*	*11/01/21 08:33*	*11/01/21 17:53*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*11/01/21 08:33*	*11/01/21 17:53*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/01/21 14:19	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			11/01/21 12:47	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		11/01/21 08:28	11/01/21 19:06	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/01/21 08:28	11/01/21 19:06	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/01/21 08:28	11/01/21 19:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*11/01/21 08:28*	*11/01/21 19:06*	*1*
o-Terphenyl	*86*		*70 - 130*	*11/01/21 08:28*	*11/01/21 19:06*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	338		4.95		mg/Kg			11/02/21 12:50	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1497-1
SDG: 31403236.020.0129

Client Sample ID: SW11

Date Collected: 10/27/21 10:21
Date Received: 10/28/21 14:48
Sample Depth: 0 - 4

Lab Sample ID: 890-1497-6

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		11/01/21 08:33	11/01/21 18:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 18:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 18:14	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		11/01/21 08:33	11/01/21 18:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 18:14	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		11/01/21 08:33	11/01/21 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*11/01/21 08:33*	*11/01/21 18:14*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*11/01/21 08:33*	*11/01/21 18:14*	*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			11/01/21 14:19	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			11/01/21 12:47	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		11/01/21 08:28	11/01/21 19:27	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/01/21 08:28	11/01/21 19:27	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/01/21 08:28	11/01/21 19:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*75*		*70 - 130*	*11/01/21 08:28*	*11/01/21 19:27*	*1*
o-Terphenyl	*81*		*70 - 130*	*11/01/21 08:28*	*11/01/21 19:27*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**96.4**		4.99		mg/Kg			11/01/21 17:26	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1497-1
SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1497-1	SW01	122	103
890-1497-2	SW02	122	70
890-1497-3	SW06	112	104
890-1497-4	SW07	112	73
890-1497-5	SW09	141 S1+	92
890-1497-6	SW11	111	103
890-1498-A-1-A MS	Matrix Spike	117	99
890-1498-A-1-B MSD	Matrix Spike Duplicate	119	103
LCS 880-11021/1-A	Lab Control Sample	121	103
LCSD 880-11021/2-A	Lab Control Sample Dup	110	100
MB 880-11021/5-A	Method Blank	106	101

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1497-1	SW01	83	93
890-1497-2	SW02	90	104
890-1497-3	SW06	80	89
890-1497-4	SW07	81	91
890-1497-5	SW09	79	86
890-1497-6	SW11	75	81
890-1499-A-2-D MS	Matrix Spike	75	76
890-1499-A-2-E MSD	Matrix Spike Duplicate	85	86
LCS 880-11018/2-A	Lab Control Sample	71	77
LCSD 880-11018/3-A	Lab Control Sample Dup	81	91
MB 880-11018/1-A	Method Blank	95	113

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1497-1
SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-11021/5-A
Matrix: Solid
Analysis Batch: 11022

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11021

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 12:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 12:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 12:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/01/21 08:33	11/01/21 12:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 12:08	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/01/21 08:33	11/01/21 12:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*11/01/21 08:33*	*11/01/21 12:08*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*11/01/21 08:33*	*11/01/21 12:08*	*1*

Lab Sample ID: LCS 880-11021/1-A
Matrix: Solid
Analysis Batch: 11022

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11021

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08284		mg/Kg		83	70 - 130		
Toluene			0.100	0.08405		mg/Kg		84	70 - 130		
Ethylbenzene			0.100	0.08962		mg/Kg		90	70 - 130		
m-Xylene & p-Xylene			0.200	0.1923		mg/Kg		96	70 - 130		
o-Xylene			0.100	0.09704		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-11021/2-A
Matrix: Solid
Analysis Batch: 11022

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11021

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07647		mg/Kg		76	70 - 130	8	35
Toluene			0.100	0.07398		mg/Kg		74	70 - 130	13	35
Ethylbenzene			0.100	0.07944		mg/Kg		79	70 - 130	12	35
m-Xylene & p-Xylene			0.200	0.1712		mg/Kg		86	70 - 130	12	35
o-Xylene			0.100	0.08722		mg/Kg		87	70 - 130	11	35

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

Lab Sample ID: 890-1498-A-1-B MSD
Matrix: Solid
Analysis Batch: 11022

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 11021

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0998	0.07206		mg/Kg					
Toluene	<0.00199	U	0.0998	0.07077		mg/Kg					

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QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1497-1
SDG: 31403236.020.0129

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

Lab Sample ID: 890-1498-A-1-B MSD
Matrix: Solid
Analysis Batch: 11022

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 11021

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene	<0.00199	U	0.0998	0.07668		mg/Kg					
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1630		mg/Kg					
o-Xylene	<0.00199	U	0.0998	0.08213		mg/Kg					

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-1498-A-1-A MS
Matrix: Solid
Analysis Batch: 11022

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

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

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

Lab Sample ID: MB 880-11018/1-A
Matrix: Solid
Analysis Batch: 11030

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11018

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/01/21 08:28	11/01/21 11:33	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/01/21 08:28	11/01/21 11:33	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/01/21 08:28	11/01/21 11:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*11/01/21 08:28*	*11/01/21 11:33*	*1*
o-Terphenyl	*113*		*70 - 130*	*11/01/21 08:28*	*11/01/21 11:33*	*1*

Lab Sample ID: LCS 880-11018/2-A
Matrix: Solid
Analysis Batch: 11030

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11018

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1022		mg/Kg		102	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	733.9		mg/Kg		73	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*71*		*70 - 130*
o-Terphenyl	*77*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1497-1
SDG: 31403236.020.0129

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

Lab Sample ID: LCSD 880-11018/3-A
Matrix: Solid
Analysis Batch: 11030

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11018

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1013		mg/Kg		101	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	775.2		mg/Kg		78	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*81*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

Lab Sample ID: 890-1499-A-2-D MS
Matrix: Solid
Analysis Batch: 11030

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 11018

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	889.3		mg/Kg		89	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1	997	663.3	F1	mg/Kg		67	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*75*		*70 - 130*
o-Terphenyl	*76*		*70 - 130*

Lab Sample ID: 890-1499-A-2-E MSD
Matrix: Solid
Analysis Batch: 11030

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 11018

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	940.4		mg/Kg		94	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	1000	783.6		mg/Kg		78	70 - 130	17	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*85*		*70 - 130*
o-Terphenyl	*86*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-11038/1-A
Matrix: Solid
Analysis Batch: 11110

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/01/21 12:38	1

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1497-1
SDG: 31403236.020.0129

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-11038/2-A
Matrix: Solid
Analysis Batch: 11110

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	240.3		mg/Kg		96	90 - 110		

Lab Sample ID: LCSD 880-11038/3-A
Matrix: Solid
Analysis Batch: 11110

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	236.8		mg/Kg		95	90 - 110	1	20

Lab Sample ID: 890-1499-A-9-E MS
Matrix: Solid
Analysis Batch: 11110

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	155		249	416.2		mg/Kg		105	90 - 110		

Lab Sample ID: 890-1499-A-9-F MSD
Matrix: Solid
Analysis Batch: 11110

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	155		249	409.1		mg/Kg		102	90 - 110	2	20

Lab Sample ID: MB 880-11106/1-A
Matrix: Solid
Analysis Batch: 11131

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/01/21 16:33	1

Lab Sample ID: LCS 880-11106/2-A
Matrix: Solid
Analysis Batch: 11131

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	242.9		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-11106/3-A
Matrix: Solid
Analysis Batch: 11131

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	239.8		mg/Kg		96	90 - 110	1	20

Lab Sample ID: 890-1497-2 MS
Matrix: Solid
Analysis Batch: 11131

Client Sample ID: SW02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	17.1		250	281.1		mg/Kg		106	90 - 110		

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1497-1
SDG: 31403236.020.0129

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-1497-2 MSD
Matrix: Solid
Analysis Batch: 11131

Client Sample ID: SW02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	17.1		250	279.5		mg/Kg		105	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1497-1
SDG: 31403236.020.0129

GC VOA

Prep Batch: 11021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1497-1	SW01	Total/NA	Solid	5035	
890-1497-2	SW02	Total/NA	Solid	5035	
890-1497-3	SW06	Total/NA	Solid	5035	
890-1497-4	SW07	Total/NA	Solid	5035	
890-1497-5	SW09	Total/NA	Solid	5035	
890-1497-6	SW11	Total/NA	Solid	5035	
MB 880-11021/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11021/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11021/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1498-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 11022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1497-1	SW01	Total/NA	Solid	8021B	11021
890-1497-2	SW02	Total/NA	Solid	8021B	11021
890-1497-3	SW06	Total/NA	Solid	8021B	11021
890-1497-4	SW07	Total/NA	Solid	8021B	11021
890-1497-5	SW09	Total/NA	Solid	8021B	11021
890-1497-6	SW11	Total/NA	Solid	8021B	11021
MB 880-11021/5-A	Method Blank	Total/NA	Solid	8021B	11021
LCS 880-11021/1-A	Lab Control Sample	Total/NA	Solid	8021B	11021
LCSD 880-11021/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11021
890-1498-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	
890-1498-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	11021

Analysis Batch: 11149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1497-1	SW01	Total/NA	Solid	Total BTEX	
890-1497-2	SW02	Total/NA	Solid	Total BTEX	
890-1497-3	SW06	Total/NA	Solid	Total BTEX	
890-1497-4	SW07	Total/NA	Solid	Total BTEX	
890-1497-5	SW09	Total/NA	Solid	Total BTEX	
890-1497-6	SW11	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 11018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1497-1	SW01	Total/NA	Solid	8015NM Prep	
890-1497-2	SW02	Total/NA	Solid	8015NM Prep	
890-1497-3	SW06	Total/NA	Solid	8015NM Prep	
890-1497-4	SW07	Total/NA	Solid	8015NM Prep	
890-1497-5	SW09	Total/NA	Solid	8015NM Prep	
890-1497-6	SW11	Total/NA	Solid	8015NM Prep	
MB 880-11018/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-11018/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-11018/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1499-A-2-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1499-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1497-1
SDG: 31403236.020.0129

GC Semi VOA

Analysis Batch: 11030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1497-1	SW01	Total/NA	Solid	8015B NM	11018
890-1497-2	SW02	Total/NA	Solid	8015B NM	11018
890-1497-3	SW06	Total/NA	Solid	8015B NM	11018
890-1497-4	SW07	Total/NA	Solid	8015B NM	11018
890-1497-5	SW09	Total/NA	Solid	8015B NM	11018
890-1497-6	SW11	Total/NA	Solid	8015B NM	11018
MB 880-11018/1-A	Method Blank	Total/NA	Solid	8015B NM	11018
LCS 880-11018/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	11018
LCSD 880-11018/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	11018
890-1499-A-2-D MS	Matrix Spike	Total/NA	Solid	8015B NM	11018
890-1499-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	11018

Analysis Batch: 11118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1497-1	SW01	Total/NA	Solid	8015 NM	
890-1497-2	SW02	Total/NA	Solid	8015 NM	
890-1497-3	SW06	Total/NA	Solid	8015 NM	
890-1497-4	SW07	Total/NA	Solid	8015 NM	
890-1497-5	SW09	Total/NA	Solid	8015 NM	
890-1497-6	SW11	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 11038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1497-1	SW01	Soluble	Solid	DI Leach	
MB 880-11038/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11038/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11038/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1499-A-9-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1499-A-9-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 11106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1497-2	SW02	Soluble	Solid	DI Leach	
890-1497-3	SW06	Soluble	Solid	DI Leach	
890-1497-4	SW07	Soluble	Solid	DI Leach	
890-1497-5	SW09	Soluble	Solid	DI Leach	
890-1497-6	SW11	Soluble	Solid	DI Leach	
MB 880-11106/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11106/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11106/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1497-2 MS	SW02	Soluble	Solid	DI Leach	
890-1497-2 MSD	SW02	Soluble	Solid	DI Leach	

Analysis Batch: 11110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1497-1	SW01	Soluble	Solid	300.0	11038
MB 880-11038/1-A	Method Blank	Soluble	Solid	300.0	11038
LCS 880-11038/2-A	Lab Control Sample	Soluble	Solid	300.0	11038
LCSD 880-11038/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11038

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1497-1
Project/Site: PLU 78B SDG: 31403236.020.0129

HPLC/IC (Continued)

Analysis Batch: 11110 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1499-A-9-E MS	Matrix Spike	Soluble	Solid	300.0	11038
890-1499-A-9-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	11038

Analysis Batch: 11131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1497-2	SW02	Soluble	Solid	300.0	11106
890-1497-3	SW06	Soluble	Solid	300.0	11106
890-1497-4	SW07	Soluble	Solid	300.0	11106
890-1497-5	SW09	Soluble	Solid	300.0	11106
890-1497-6	SW11	Soluble	Solid	300.0	11106
MB 880-11106/1-A	Method Blank	Soluble	Solid	300.0	11106
LCS 880-11106/2-A	Lab Control Sample	Soluble	Solid	300.0	11106
LCSD 880-11106/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11106
890-1497-2 MS	SW02	Soluble	Solid	300.0	11106
890-1497-2 MSD	SW02	Soluble	Solid	300.0	11106

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1497-1
SDG: 31403236.020.0129

Client Sample ID: SW01
Date Collected: 10/27/21 14:04
Date Received: 10/28/21 14:48

Lab Sample ID: 890-1497-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11021	11/01/21 08:33	KL	XEN MID
Total/NA	Analysis	8021B		1	11022	11/01/21 15:29	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	11149	11/01/21 14:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11118	11/01/21 12:47	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11018	11/01/21 08:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11030	11/01/21 17:39	AJ	XEN MID
Soluble	Leach	DI Leach			11038	11/01/21 09:55	CH	XEN MID
Soluble	Analysis	300.0		1	11110	11/01/21 15:34	CH	XEN MID

Client Sample ID: SW02
Date Collected: 10/27/21 14:06
Date Received: 10/28/21 14:48

Lab Sample ID: 890-1497-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11021	11/01/21 08:33	KL	XEN MID
Total/NA	Analysis	8021B		1	11022	11/01/21 15:49	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	11149	11/01/21 14:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11118	11/01/21 12:47	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11018	11/01/21 08:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11030	11/01/21 18:01	AJ	XEN MID
Soluble	Leach	DI Leach			11106	11/01/21 11:53	SC	XEN MID
Soluble	Analysis	300.0		1	11131	11/01/21 16:51	CH	XEN MID

Client Sample ID: SW06
Date Collected: 10/27/21 14:42
Date Received: 10/28/21 14:48

Lab Sample ID: 890-1497-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11021	11/01/21 08:33	KL	XEN MID
Total/NA	Analysis	8021B		1	11022	11/01/21 17:12	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	11149	11/01/21 14:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11118	11/01/21 12:47	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11018	11/01/21 08:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11030	11/01/21 18:22	AJ	XEN MID
Soluble	Leach	DI Leach			11106	11/01/21 11:53	SC	XEN MID
Soluble	Analysis	300.0		10	11131	11/01/21 17:08	CH	XEN MID

Client Sample ID: SW07
Date Collected: 10/27/21 08:38
Date Received: 10/28/21 14:48

Lab Sample ID: 890-1497-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11021	11/01/21 08:33	KL	XEN MID
Total/NA	Analysis	8021B		1	11022	11/01/21 17:33	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	11149	11/01/21 14:19	AJ	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1497-1
SDG: 31403236.020.0129

Client Sample ID: SW07

Lab Sample ID: 890-1497-4
Matrix: Solid
Date Collected: 10/27/21 08:38
Date Received: 10/28/21 14:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	11118	11/01/21 12:47	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11018	11/01/21 08:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11030	11/01/21 18:44	AJ	XEN MID
Soluble	Leach	DI Leach			11106	11/01/21 11:53	SC	XEN MID
Soluble	Analysis	300.0		1	11131	11/01/21 17:14	CH	XEN MID

Client Sample ID: SW09

Lab Sample ID: 890-1497-5
Matrix: Solid
Date Collected: 10/27/21 13:25
Date Received: 10/28/21 14:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11021	11/01/21 08:33	KL	XEN MID
Total/NA	Analysis	8021B		1	11022	11/01/21 17:53	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	11149	11/01/21 14:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11118	11/01/21 12:47	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11018	11/01/21 08:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11030	11/01/21 19:06	AJ	XEN MID
Soluble	Leach	DI Leach			11106	11/01/21 11:53	SC	XEN MID
Soluble	Analysis	300.0		1	11131	11/02/21 12:50	CH	XEN MID

Client Sample ID: SW11

Lab Sample ID: 890-1497-6
Matrix: Solid
Date Collected: 10/27/21 10:21
Date Received: 10/28/21 14:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11021	11/01/21 08:33	KL	XEN MID
Total/NA	Analysis	8021B		1	11022	11/01/21 18:14	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	11149	11/01/21 14:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11118	11/01/21 12:47	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11018	11/01/21 08:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11030	11/01/21 19:27	AJ	XEN MID
Soluble	Leach	DI Leach			11106	11/01/21 11:53	SC	XEN MID
Soluble	Analysis	300.0		1	11131	11/01/21 17:26	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-1497-1
Project/Site: PLU 78B SDG: 31403236.020.0129

Laboratory: Eurofins Xenco, 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: 890-1497-1
Project/Site: PLU 78B SDG: 31403236.020.0129

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 Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1497-1
SDG: 31403236.020.0129

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1497-1	SW01	Solid	10/27/21 14:04	10/28/21 14:48	0 - 4
890-1497-2	SW02	Solid	10/27/21 14:06	10/28/21 14:48	0 - 4
890-1497-3	SW06	Solid	10/27/21 14:42	10/28/21 14:48	0 - 4
890-1497-4	SW07	Solid	10/27/21 08:38	10/28/21 14:48	0 - 4
890-1497-5	SW09	Solid	10/27/21 13:25	10/28/21 14:48	0 - 4
890-1497-6	SW11	Solid	10/27/21 10:21	10/28/21 14:48	0 - 4

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: _____

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Project Manager:	Kalei Jennings	Bill to: (if different)	Adrian Baker
Company Name:	WSP USA	Company Name:	Xto Energy
Address:	3300 North A Street Bldg 1, Unit 222	Address:	3104 E Green Street
City, State ZIP:	Midland, Texas 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	817-683-2503 Email:	Email:	Tacoma.Morrissey@wsp.com, Travis.Casey@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 78B	Turn Around	
Project Number:	31403236.020.0129	Routine	~~Routine~~
P.O. Number:		Rush:	48 HR
Sampler's Name:	Travis Casey	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)	Sample Comments
SW01	S	10/27/2021	14:04	0-4	1	X	X	X	Composite
SW02	S	10/27/2021	14:06	0-4	1	X	X	X	Composite
SW06	S	10/27/2021	14:42	0-4	1	X	X	X	Composite
SW07	S	10/27/2021	8:38	0-4	1	X	X	X	Composite
SW09	S	10/27/2021	13:25	0-4	1	X	X	X	Composite
SW11	S	10/27/2021	10:21	0-4	1	X	X	X	Composite

Work Order Notes

Incident ID NAPP2126639352
Cost Center: 1080781001
API: 30-015-27536

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	PBenner	Cruz Cruz	10.28.21 1448	2		
3				4		
5				6		

Revised Date 051418 Rev 2018.1

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-488 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas		Job #: 890-1497-1
Address: 1211 W Florida Ave	Due Date Requested: 11/2/2021			
City: Midland	TAT Requested (days):			
State Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: PLU 78B	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
SW01 (890-1497-1)	10/27/21	14 04 Mountain		Solid			X	X	X	X	X	1	
SW02 (890-1497-2)	10/27/21	14 06 Mountain		Solid			X	X	X	X	X	1	
SW06 (890-1497-3)	10/27/21	14 42 Mountain		Solid			X	X	X	X	X	1	
SW07 (890-1497-4)	10/27/21	08 38 Mountain		Solid			X	X	X	X	X	1	
SW09 (890-1497-5)	10/27/21	13 25 Mountain		Solid			X	X	X	X	X	1	
SW11 (890-1497-6)	10/27/21	10 21 Mountain		Solid			X	X	X	X	X	1	

Note Since laboratory accreditations are subject to change Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:
Relinquished by: [signature] 10.29	Date/Time	Company	Received by: [signature] Kramer Date/Time: 11.1.21 Company
Relinquished by:	Date/Time	Company	Received by: Date/Time: Company
Relinquished by:	Date/Time	Company	Received by: Date/Time Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 2.6/2.7

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1497-1
SDG Number: 31403236.020.0129

Login Number: 1497
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, 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: 890-1497-1
SDG Number: 31403236.020.0129

Login Number: 1497
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland
List Creation: 11/01/21 08:46 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6/2.7
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 Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-1498-1
Laboratory Sample Delivery Group: 3140326.020.0129
Client Project/Site: PLU 78B

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
11/1/2021 4:07:18 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 78B

Laboratory Job ID: 890-1498-1
SDG: 3140326.020.0129

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1498-1
Project/Site: PLU 78B SDG: 3140326.020.0129

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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 78B

Job ID: 890-1498-1
SDG: 3140326.020.0129

Job ID: 890-1498-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1498-1

Receipt
The samples were received on 10/29/2021 10:16 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.8°C

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

GC Semi VOA
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 880-11038 and analytical batch 880-11110 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 78B

Job ID: 890-1498-1
SDG: 3140326.020.0129

Client Sample ID: SW03

Lab Sample ID: 890-1498-1
Matrix: Solid
Date Collected: 10/27/21 08:32
Date Received: 10/29/21 10:16
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/01/21 08:33	11/01/21 12:45	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/01/21 08:33	11/01/21 12:45	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/01/21 08:33	11/01/21 12:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/01/21 08:33	11/01/21 12:45	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/01/21 08:33	11/01/21 12:45	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/01/21 08:33	11/01/21 12:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*11/01/21 08:33*	*11/01/21 12:45*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*11/01/21 08:33*	*11/01/21 12:45*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/01/21 14:01	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			11/01/21 12:47	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 F1	49.9		mg/Kg		11/01/21 08:22	11/01/21 12:30	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/01/21 08:22	11/01/21 12:30	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/01/21 08:22	11/01/21 12:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*11/01/21 08:22*	*11/01/21 12:30*	*1*
o-Terphenyl	*93*		*70 - 130*	*11/01/21 08:22*	*11/01/21 12:30*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5970**	**F1**	50.0		mg/Kg			11/01/21 12:56	10

Client Sample ID: SW04

Lab Sample ID: 890-1498-2
Matrix: Solid
Date Collected: 10/27/21 08:34
Date Received: 10/29/21 10:16
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/01/21 08:33	11/01/21 13:06	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/01/21 08:33	11/01/21 13:06	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/01/21 08:33	11/01/21 13:06	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/01/21 08:33	11/01/21 13:06	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/01/21 08:33	11/01/21 13:06	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/01/21 08:33	11/01/21 13:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*133*	*S1+*	*70 - 130*	*11/01/21 08:33*	*11/01/21 13:06*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1498-1
SDG: 3140326.020.0129

Client Sample ID: SW04

Lab Sample ID: 890-1498-2
Matrix: Solid
Date Collected: 10/27/21 08:34
Date Received: 10/29/21 10:16
Sample Depth: 0 - 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*11/01/21 08:33*	*11/01/21 13:06*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			11/01/21 14:01	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			11/01/21 12:47	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		11/01/21 08:22	11/01/21 13:30	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/01/21 08:22	11/01/21 13:30	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/01/21 08:22	11/01/21 13:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*96*		*70 - 130*	*11/01/21 08:22*	*11/01/21 13:30*	*1*
o-Terphenyl	*109*		*70 - 130*	*11/01/21 08:22*	*11/01/21 13:30*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5900**		49.5	mg/Kg			11/01/21 13:14	10

Client Sample ID: SW05

Lab Sample ID: 890-1498-3
Matrix: Solid
Date Collected: 10/27/21 08:35
Date Received: 10/29/21 10:16
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		11/01/21 08:33	11/01/21 13:26	1
Toluene	<0.00199	U	0.00199	mg/Kg		11/01/21 08:33	11/01/21 13:26	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		11/01/21 08:33	11/01/21 13:26	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		11/01/21 08:33	11/01/21 13:26	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		11/01/21 08:33	11/01/21 13:26	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		11/01/21 08:33	11/01/21 13:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*11/01/21 08:33*	*11/01/21 13:26*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*11/01/21 08:33*	*11/01/21 13:26*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			11/01/21 14:01	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			11/01/21 12:47	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1498-1
SDG: 3140326.020.0129

Client Sample ID: SW05
Date Collected: 10/27/21 08:35
Date Received: 10/29/21 10:16
Sample Depth: 0 - 4

Lab Sample ID: 890-1498-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/01/21 08:22	11/01/21 13:50	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/01/21 08:22	11/01/21 13:50	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/01/21 08:22	11/01/21 13:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*11/01/21 08:22*	*11/01/21 13:50*	*1*
o-Terphenyl	*99*		*70 - 130*	*11/01/21 08:22*	*11/01/21 13:50*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7210**		50.4		mg/Kg			11/01/21 13:20	10

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1498-1
SDG: 3140326.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1498-1	SW03	119	105
890-1498-1 MS	SW03	117	99
890-1498-1 MSD	SW03	119	103
890-1498-2	SW04	133 S1+	103
890-1498-3	SW05	125	95
LCS 880-11021/1-A	Lab Control Sample	121	103
LCSD 880-11021/2-A	Lab Control Sample Dup	110	100
MB 880-11021/5-A	Method Blank	106	101

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1498-1	SW03	80	93
890-1498-1 MS	SW03	95	93
890-1498-1 MSD	SW03	93	92
890-1498-2	SW04	96	109
890-1498-3	SW05	90	99
LCS 880-11017/2-A	Lab Control Sample	86	88
LCSD 880-11017/3-A	Lab Control Sample Dup	104	108
MB 880-11017/1-A	Method Blank	98	112

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1498-1
SDG: 3140326.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-11021/5-A
Matrix: Solid
Analysis Batch: 11022

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11021

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 12:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 12:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 12:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/01/21 08:33	11/01/21 12:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/21 08:33	11/01/21 12:08	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/01/21 08:33	11/01/21 12:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*11/01/21 08:33*	*11/01/21 12:08*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*11/01/21 08:33*	*11/01/21 12:08*	*1*

Lab Sample ID: LCS 880-11021/1-A
Matrix: Solid
Analysis Batch: 11022

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11021

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08284		mg/Kg		83	70 - 130		
Toluene			0.100	0.08405		mg/Kg		84	70 - 130		
Ethylbenzene			0.100	0.08962		mg/Kg		90	70 - 130		
m-Xylene & p-Xylene			0.200	0.1923		mg/Kg		96	70 - 130		
o-Xylene			0.100	0.09704		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-11021/2-A
Matrix: Solid
Analysis Batch: 11022

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11021

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07647		mg/Kg		76	70 - 130	8	35
Toluene			0.100	0.07398		mg/Kg		74	70 - 130	13	35
Ethylbenzene			0.100	0.07944		mg/Kg		79	70 - 130	12	35
m-Xylene & p-Xylene			0.200	0.1712		mg/Kg		86	70 - 130	12	35
o-Xylene			0.100	0.08722		mg/Kg		87	70 - 130	11	35

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

Lab Sample ID: 890-1498-1 MSD
Matrix: Solid
Analysis Batch: 11022

Client Sample ID: SW03
Prep Type: Total/NA
Prep Batch: 11021

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0998	0.07206		mg/Kg					
Toluene	<0.00199	U	0.0998	0.07077		mg/Kg					

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1498-1
SDG: 3140326.020.0129

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

Lab Sample ID: 890-1498-1 MSD
Matrix: Solid
Analysis Batch: 11022

Client Sample ID: SW03
Prep Type: Total/NA
Prep Batch: 11021

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene	<0.00199	U	0.0998	0.07668		mg/Kg					
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1630		mg/Kg					
o-Xylene	<0.00199	U	0.0998	0.08213		mg/Kg					

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-1498-1 MS
Matrix: Solid
Analysis Batch: 11022

Client Sample ID: SW03
Prep Type: Total/NA

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

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

Lab Sample ID: MB 880-11017/1-A
Matrix: Solid
Analysis Batch: 11034

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11017

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/01/21 08:22	11/01/21 11:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/01/21 08:22	11/01/21 11:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/01/21 08:22	11/01/21 11:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*11/01/21 08:22*	*11/01/21 11:29*	*1*
o-Terphenyl	*112*		*70 - 130*	*11/01/21 08:22*	*11/01/21 11:29*	*1*

Lab Sample ID: LCS 880-11017/2-A
Matrix: Solid
Analysis Batch: 11034

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11017

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1010		mg/Kg		101	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	737.8		mg/Kg		74	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*86*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1498-1
SDG: 3140326.020.0129

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

Lab Sample ID: LCSD 880-11017/3-A
Matrix: Solid
Analysis Batch: 11034

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11017

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1140		mg/Kg		114	70 - 130	12	20
Diesel Range Organics (Over C10-C28)			1000	877.8		mg/Kg		88	70 - 130	17	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*108*		*70 - 130*

Lab Sample ID: 890-1498-1 MS
Matrix: Solid
Analysis Batch: 11034

Client Sample ID: SW03
Prep Type: Total/NA
Prep Batch: 11017

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	997	1296		mg/Kg		130	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	997	894.2		mg/Kg		87	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

Lab Sample ID: 890-1498-1 MSD
Matrix: Solid
Analysis Batch: 11034

Client Sample ID: SW03
Prep Type: Total/NA
Prep Batch: 11017

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	1000	1510	F1	mg/Kg		151	70 - 130	15	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	891.0		mg/Kg		86	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-11038/1-A
Matrix: Solid
Analysis Batch: 11110

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/01/21 12:38	1

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1498-1
SDG: 3140326.020.0129

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-11038/2-A
Matrix: Solid
Analysis Batch: 11110

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	240.3		mg/Kg		96	90 - 110		

Lab Sample ID: LCSD 880-11038/3-A
Matrix: Solid
Analysis Batch: 11110

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	236.8		mg/Kg		95	90 - 110	1	20

Lab Sample ID: 890-1498-1 MS
Matrix: Solid
Analysis Batch: 11110

Client Sample ID: SW03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	5970	F1	2500	8764	F1	mg/Kg		112	90 - 110		

Lab Sample ID: 890-1498-1 MSD
Matrix: Solid
Analysis Batch: 11110

Client Sample ID: SW03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5970	F1	2500	8663		mg/Kg		108	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1498-1
SDG: 3140326.020.0129

GC VOA

Prep Batch: 11021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1498-1	SW03	Total/NA	Solid	5035	
890-1498-2	SW04	Total/NA	Solid	5035	
890-1498-3	SW05	Total/NA	Solid	5035	
MB 880-11021/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11021/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11021/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1498-1 MSD	SW03	Total/NA	Solid	5035	

Analysis Batch: 11022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1498-1	SW03	Total/NA	Solid	8021B	11021
890-1498-2	SW04	Total/NA	Solid	8021B	11021
890-1498-3	SW05	Total/NA	Solid	8021B	11021
MB 880-11021/5-A	Method Blank	Total/NA	Solid	8021B	11021
LCS 880-11021/1-A	Lab Control Sample	Total/NA	Solid	8021B	11021
LCSD 880-11021/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11021
890-1498-1 MS	SW03	Total/NA	Solid	8021B	
890-1498-1 MSD	SW03	Total/NA	Solid	8021B	11021

Analysis Batch: 11149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1498-1	SW03	Total/NA	Solid	Total BTEX	
890-1498-2	SW04	Total/NA	Solid	Total BTEX	
890-1498-3	SW05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 11017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1498-1	SW03	Total/NA	Solid	8015NM Prep	
890-1498-2	SW04	Total/NA	Solid	8015NM Prep	
890-1498-3	SW05	Total/NA	Solid	8015NM Prep	
MB 880-11017/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-11017/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-11017/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1498-1 MS	SW03	Total/NA	Solid	8015NM Prep	
890-1498-1 MSD	SW03	Total/NA	Solid	8015NM Prep	

Analysis Batch: 11034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1498-1	SW03	Total/NA	Solid	8015B NM	11017
890-1498-2	SW04	Total/NA	Solid	8015B NM	11017
890-1498-3	SW05	Total/NA	Solid	8015B NM	11017
MB 880-11017/1-A	Method Blank	Total/NA	Solid	8015B NM	11017
LCS 880-11017/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	11017
LCSD 880-11017/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	11017
890-1498-1 MS	SW03	Total/NA	Solid	8015B NM	11017
890-1498-1 MSD	SW03	Total/NA	Solid	8015B NM	11017

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1498-1
SDG: 3140326.020.0129

GC Semi VOA

Analysis Batch: 11118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1498-1	SW03	Total/NA	Solid	8015 NM	
890-1498-2	SW04	Total/NA	Solid	8015 NM	
890-1498-3	SW05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 11038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1498-1	SW03	Soluble	Solid	DI Leach	
890-1498-2	SW04	Soluble	Solid	DI Leach	
890-1498-3	SW05	Soluble	Solid	DI Leach	
MB 880-11038/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11038/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11038/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1498-1 MS	SW03	Soluble	Solid	DI Leach	
890-1498-1 MSD	SW03	Soluble	Solid	DI Leach	

Analysis Batch: 11110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1498-1	SW03	Soluble	Solid	300.0	11038
890-1498-2	SW04	Soluble	Solid	300.0	11038
890-1498-3	SW05	Soluble	Solid	300.0	11038
MB 880-11038/1-A	Method Blank	Soluble	Solid	300.0	11038
LCS 880-11038/2-A	Lab Control Sample	Soluble	Solid	300.0	11038
LCSD 880-11038/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11038
890-1498-1 MS	SW03	Soluble	Solid	300.0	11038
890-1498-1 MSD	SW03	Soluble	Solid	300.0	11038

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1498-1
Project/Site: PLU 78B SDG: 3140326.020.0129

Client Sample ID: SW03 Lab Sample ID: 890-1498-1

Date Collected: 10/27/21 08:32 **Matrix: Solid**
Date Received: 10/29/21 10:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11021	11/01/21 08:33	KL	XEN MID
Total/NA	Analysis	8021B		1	11022	11/01/21 12:45	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	11149	11/01/21 14:01	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11118	11/01/21 12:47	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11017	11/01/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11034	11/01/21 12:30	AJ	XEN MID
Soluble	Leach	DI Leach			11038	11/01/21 09:55	CH	XEN MID
Soluble	Analysis	300.0		10	11110	11/01/21 12:56	CH	XEN MID

Client Sample ID: SW04 Lab Sample ID: 890-1498-2

Date Collected: 10/27/21 08:34 **Matrix: Solid**
Date Received: 10/29/21 10:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11021	11/01/21 08:33	KL	XEN MID
Total/NA	Analysis	8021B		1	11022	11/01/21 13:06	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	11149	11/01/21 14:01	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11118	11/01/21 12:47	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11017	11/01/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11034	11/01/21 13:30	AJ	XEN MID
Soluble	Leach	DI Leach			11038	11/01/21 09:55	CH	XEN MID
Soluble	Analysis	300.0		10	11110	11/01/21 13:14	CH	XEN MID

Client Sample ID: SW05 Lab Sample ID: 890-1498-3

Date Collected: 10/27/21 08:35 **Matrix: Solid**
Date Received: 10/29/21 10:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11021	11/01/21 08:33	KL	XEN MID
Total/NA	Analysis	8021B		1	11022	11/01/21 13:26	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	11149	11/01/21 14:01	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11118	11/01/21 12:47	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11017	11/01/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11034	11/01/21 13:50	AJ	XEN MID
Soluble	Leach	DI Leach			11038	11/01/21 09:55	CH	XEN MID
Soluble	Analysis	300.0		10	11110	11/01/21 13:20	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1498-1
SDG: 3140326.020.0129

Laboratory: Eurofins Xenco, 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: 890-1498-1
Project/Site: PLU 78B SDG: 3140326.020.0129

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 Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: WSP USA Inc.
Project/Site: PLU 78B

Job ID: 890-1498-1
SDG: 3140326.020.0129

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1498-1	SW03	Solid	10/27/21 08:32	10/29/21 10:16	0 - 4
890-1498-2	SW04	Solid	10/27/21 08:34	10/29/21 10:16	0 - 4
890-1498-3	SW05	Solid	10/27/21 08:35	10/29/21 10:16	0 - 4

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: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A St. Bldg 1, Unit 222	Address:	3104 E Greene St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	(432) 704-5178	Email:	travis.casey@wsp.com, kalei.jennings@wsp.com, dan.moir@w

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐
State of Project: NM
Reporting:Level II ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 78 B	Turn Around	
Project Number:	31403236.020.0129	Routine	
P.O. Number:		Rush: 24hr.	
Sampler's Name:	Travis Casey	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	2.0/1.8	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:	

ANALYSIS REQUEST

890-1498 Chain of Custody

Work Order Notes

IN:NAPP2126639352
CC:1080781001
API:30-015-27536

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
SW03	S	10/27/2021	0832	0-4	1	x	x	x	Composite
SW04	S	10/27/2021	0834	0-4	1	x	x	x	Composite
SW05	S	10/27/2021	0835	0-4	1	x	x	x	Composite

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 Tacoma Morrissey	Clue Cruz 10.29.21 1016	10/29/21 1015	2		
3			4		
5			6		

Revised Date 051418 Rev 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1498-1
SDG Number: 3140326.020.0129

Login Number: 1498
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, 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: 890-1498-1
SDG Number: 3140326.020.0129

Login Number: 1498
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland
List Creation: 11/01/21 08:46 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6/2.7
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 Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-1526-1
Laboratory Sample Delivery Group: 31403236.20.0129
Client Project/Site: PLU 78 B

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
11/9/2021 1:57:32 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 78 B

Laboratory Job ID: 890-1526-1
SDG: 31403236.20.0129

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1526-1
Project/Site: PLU 78 B SDG: 31403236.20.0129

Qualifiers

GC VOA

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

GC Semi VOA

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

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 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

Job ID: 890-1526-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1526-1

Receipt
The samples were received on 11/3/2021 4:54 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.2°C

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

GC Semi VOA
Method 8015MOD_NM: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with preparation batch 880-11444 and analytical batch 880-11509 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Diesel Range Organics (Over C10-C28) and OII Range Organics (Over C28-C36) in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

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 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

Client Sample ID: SW10

Lab Sample ID: 890-1526-1
Matrix: Solid
Date Collected: 10/27/21 10:20
Date Received: 11/03/21 16:54
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/05/21 09:00	11/05/21 14:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/05/21 09:00	11/05/21 14:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/05/21 09:00	11/05/21 14:08	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/05/21 09:00	11/05/21 14:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/05/21 09:00	11/05/21 14:08	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/05/21 09:00	11/05/21 14:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*11/05/21 09:00*	*11/05/21 14:08*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*11/05/21 09:00*	*11/05/21 14:08*	*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			11/05/21 13:34	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			11/05/21 13:50	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		11/04/21 10:41	11/05/21 14:11	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/04/21 10:41	11/05/21 14:11	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/04/21 10:41	11/05/21 14:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*11/04/21 10:41*	*11/05/21 14:11*	*1*
o-Terphenyl	*135*	*S1+*	*70 - 130*	*11/04/21 10:41*	*11/05/21 14:11*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6410**	**F1**	50.5		mg/Kg			11/09/21 04:11	10

Client Sample ID: SW12

Lab Sample ID: 890-1526-2
Matrix: Solid
Date Collected: 10/27/21 10:23
Date Received: 11/03/21 16:54
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/05/21 09:00	11/05/21 14:29	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/05/21 09:00	11/05/21 14:29	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/05/21 09:00	11/05/21 14:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/05/21 09:00	11/05/21 14:29	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/05/21 09:00	11/05/21 14:29	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/05/21 09:00	11/05/21 14:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*11/05/21 09:00*	*11/05/21 14:29*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

Client Sample ID: SW12

Lab Sample ID: 890-1526-2
Matrix: Solid
Date Collected: 10/27/21 10:23
Date Received: 11/03/21 16:54
Sample Depth: 0 - 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*11/05/21 09:00*	*11/05/21 14:29*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/05/21 13:34	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			11/05/21 13:50	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		11/04/21 10:41	11/05/21 14:33	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/04/21 10:41	11/05/21 14:33	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/04/21 10:41	11/05/21 14:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*120*		*70 - 130*	*11/04/21 10:41*	*11/05/21 14:33*	*1*
o-Terphenyl	*135*	*S1+*	*70 - 130*	*11/04/21 10:41*	*11/05/21 14:33*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3810**		25.0		mg/Kg			11/09/21 04:34	5

Client Sample ID: SW13

Lab Sample ID: 890-1526-3
Matrix: Solid
Date Collected: 10/27/21 10:28
Date Received: 11/03/21 16:54
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		11/05/21 09:00	11/05/21 14:49	1
Toluene	<0.00198	U	0.00198		mg/Kg		11/05/21 09:00	11/05/21 14:49	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		11/05/21 09:00	11/05/21 14:49	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		11/05/21 09:00	11/05/21 14:49	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		11/05/21 09:00	11/05/21 14:49	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		11/05/21 09:00	11/05/21 14:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*11/05/21 09:00*	*11/05/21 14:49*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*11/05/21 09:00*	*11/05/21 14:49*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			11/05/21 13:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**229**		50.0		mg/Kg			11/05/21 13:50	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

Client Sample ID: SW13

Lab Sample ID: 890-1526-3
Matrix: Solid
Date Collected: 10/27/21 10:28
Date Received: 11/03/21 16:54
Sample Depth: 0 - 4

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		11/04/21 10:41	11/05/21 14:54	1
Diesel Range Organics (Over C10-C28)	**229**		50.0		mg/Kg		11/04/21 10:41	11/05/21 14:54	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/04/21 10:41	11/05/21 14:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*126*		*70 - 130*	*11/04/21 10:41*	*11/05/21 14:54*	*1*
o-Terphenyl	*144*	*S1+*	*70 - 130*	*11/04/21 10:41*	*11/05/21 14:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10900**		99.6		mg/Kg			11/09/21 04:41	20

Client Sample ID: SW14

Lab Sample ID: 890-1526-4
Matrix: Solid
Date Collected: 10/28/21 10:29
Date Received: 11/03/21 16:54
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/05/21 09:00	11/05/21 15:10	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/05/21 09:00	11/05/21 15:10	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/05/21 09:00	11/05/21 15:10	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/05/21 09:00	11/05/21 15:10	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/05/21 09:00	11/05/21 15:10	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/05/21 09:00	11/05/21 15:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*142*	*S1+*	*70 - 130*	*11/05/21 09:00*	*11/05/21 15:10*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*11/05/21 09:00*	*11/05/21 15:10*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/05/21 13:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**61.9**		49.8		mg/Kg			11/05/21 13:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		11/04/21 10:41	11/05/21 15:17	1
Diesel Range Organics (Over C10-C28)	**61.9**		49.8		mg/Kg		11/04/21 10:41	11/05/21 15:17	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		11/04/21 10:41	11/05/21 15:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*11/04/21 10:41*	*11/05/21 15:17*	*1*
o-Terphenyl	*136*	*S1+*	*70 - 130*	*11/04/21 10:41*	*11/05/21 15:17*	*1*

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

Client Sample ID: SW14

Lab Sample ID: 890-1526-4
Matrix: Solid
Date Collected: 10/28/21 10:29
Date Received: 11/03/21 16:54
Sample Depth: 0 - 4

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6550**		49.5		mg/Kg			11/09/21 04:49	10

Client Sample ID: SW15

Lab Sample ID: 890-1526-5
Matrix: Solid
Date Collected: 10/29/21 10:29
Date Received: 11/03/21 16:54
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		11/05/21 09:00	11/05/21 15:30	1
Toluene	<0.00198	U	0.00198		mg/Kg		11/05/21 09:00	11/05/21 15:30	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		11/05/21 09:00	11/05/21 15:30	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		11/05/21 09:00	11/05/21 15:30	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		11/05/21 09:00	11/05/21 15:30	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		11/05/21 09:00	11/05/21 15:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*11/05/21 09:00*	*11/05/21 15:30*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*11/05/21 09:00*	*11/05/21 15:30*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			11/05/21 13:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**75.6**		50.0		mg/Kg			11/05/21 13:50	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		11/04/21 10:41	11/05/21 15:39	1
Diesel Range Organics (Over C10-C28)	**75.6**		50.0		mg/Kg		11/04/21 10:41	11/05/21 15:39	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/04/21 10:41	11/05/21 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*11/04/21 10:41*	*11/05/21 15:39*	*1*
o-Terphenyl	*128*		*70 - 130*	*11/04/21 10:41*	*11/05/21 15:39*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10700**		99.0		mg/Kg			11/09/21 04:57	20

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

Client Sample ID: SW16

Date Collected: 10/30/21 10:30
Date Received: 11/03/21 16:54
Sample Depth: 0 - 4

Lab Sample ID: 890-1526-6

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		11/05/21 09:00	11/05/21 15:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/05/21 09:00	11/05/21 15:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/05/21 09:00	11/05/21 15:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/05/21 09:00	11/05/21 15:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/05/21 09:00	11/05/21 15:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/05/21 09:00	11/05/21 15:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*11/05/21 09:00*	*11/05/21 15:51*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*11/05/21 09:00*	*11/05/21 15:51*	*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			11/05/21 13:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**74.3**		49.8		mg/Kg			11/05/21 13:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		11/04/21 10:41	11/05/21 16:01	1
Diesel Range Organics (Over C10-C28)	**74.3**		49.8		mg/Kg		11/04/21 10:41	11/05/21 16:01	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		11/04/21 10:41	11/05/21 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*11/04/21 10:41*	*11/05/21 16:01*	*1*
o-Terphenyl	*89*		*70 - 130*	*11/04/21 10:41*	*11/05/21 16:01*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10400**		50.4		mg/Kg			11/09/21 05:20	10

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)										
890-1526-1	SW10	121	98										
890-1526-2	SW12	127	98										
890-1526-3	SW13	117	96										
890-1526-4	SW14	142 S1+	80										
890-1526-5	SW15	126	105										
890-1526-6	SW16	124	102										
890-1537-A-1-B MS	Matrix Spike	111	103										
890-1537-A-1-C MSD	Matrix Spike Duplicate	119	102										
LCS 880-11475/1-A	Lab Control Sample	107	106										
LCSD 880-11475/2-A	Lab Control Sample Dup	103	106										
MB 880-11475/5-A	Method Blank	110	94										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)										
880-7973-A-1-B MS	Matrix Spike	101	84										
880-7973-A-1-C MSD	Matrix Spike Duplicate	101	90										
890-1526-1	SW10	118	135 S1+										
890-1526-2	SW12	120	135 S1+										
890-1526-3	SW13	126	144 S1+										
890-1526-4	SW14	122	136 S1+										
890-1526-5	SW15	111	128										
890-1526-6	SW16	79	89										
LCS 880-11444/2-A	Lab Control Sample	102	112										
LCSD 880-11444/3-A	Lab Control Sample Dup	97	108										
MB 880-11444/1-A	Method Blank	109	129										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-11475/5-A
Matrix: Solid
Analysis Batch: 11515

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11475

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/05/21 09:00	11/05/21 12:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/05/21 09:00	11/05/21 12:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/05/21 09:00	11/05/21 12:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/05/21 09:00	11/05/21 12:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/05/21 09:00	11/05/21 12:28	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/05/21 09:00	11/05/21 12:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*11/05/21 09:00*	*11/05/21 12:28*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*11/05/21 09:00*	*11/05/21 12:28*	*1*

Lab Sample ID: LCS 880-11475/1-A
Matrix: Solid
Analysis Batch: 11515

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11475

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08097		mg/Kg		81	70 - 130		
Toluene			0.100	0.07362		mg/Kg		74	70 - 130		
Ethylbenzene			0.100	0.07723		mg/Kg		77	70 - 130		
m-Xylene & p-Xylene			0.200	0.1612		mg/Kg		81	70 - 130		
o-Xylene			0.100	0.08159		mg/Kg		82	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-11475/2-A
Matrix: Solid
Analysis Batch: 11515

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11475

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08404		mg/Kg		84	70 - 130	4	35
Toluene			0.100	0.07617		mg/Kg		76	70 - 130	3	35
Ethylbenzene			0.100	0.07848		mg/Kg		78	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.1634		mg/Kg		82	70 - 130	1	35
o-Xylene			0.100	0.08158		mg/Kg		82	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 890-1537-A-1-B MS
Matrix: Solid
Analysis Batch: 11515

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 11475

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00199	U	0.0998	0.09141		mg/Kg		91	70 - 130		
Toluene	<0.00199	U	0.0998	0.08545		mg/Kg		85	70 - 130		

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QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

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

Lab Sample ID: 890-1537-A-1-B MS
Matrix: Solid
Analysis Batch: 11515

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 11475

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00199	U	0.0998	0.08783		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1844		mg/Kg		92	70 - 130
o-Xylene	<0.00199	U	0.0998	0.09241		mg/Kg		92	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-1537-A-1-C MSD
Matrix: Solid
Analysis Batch: 11515

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 11475

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0996	0.08206		mg/Kg		82	70 - 130	11	35
Toluene	<0.00199	U	0.0996	0.07797		mg/Kg		78	70 - 130	9	35
Ethylbenzene	<0.00199	U	0.0996	0.08478		mg/Kg		85	70 - 130	4	35
m-Xylene & p-Xylene	<0.00398	U	0.199	0.1813		mg/Kg		91	70 - 130	2	35
o-Xylene	<0.00199	U	0.0996	0.09187		mg/Kg		92	70 - 130	1	35

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

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

Lab Sample ID: MB 880-11444/1-A
Matrix: Solid
Analysis Batch: 11509

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11444

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/04/21 10:41	11/05/21 11:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/04/21 10:41	11/05/21 11:16	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/04/21 10:41	11/05/21 11:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*11/04/21 10:41*	*11/05/21 11:16*	*1*
o-Terphenyl	*129*		*70 - 130*	*11/04/21 10:41*	*11/05/21 11:16*	*1*

Lab Sample ID: LCS 880-11444/2-A
Matrix: Solid
Analysis Batch: 11509

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11444

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1120		mg/Kg		112	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1093		mg/Kg		109	70 - 130

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QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

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

Lab Sample ID: LCS 880-11444/2-A
Matrix: Solid
Analysis Batch: 11509

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11444

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	112		70 - 130

Lab Sample ID: LCSD 880-11444/3-A
Matrix: Solid
Analysis Batch: 11509

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11444

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1145		mg/Kg		114	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	1146		mg/Kg		115	70 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	108		70 - 130

Lab Sample ID: 880-7973-A-1-B MS
Matrix: Solid
Analysis Batch: 11509

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 11444

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<249	U F1 F2	997	1598	F1	mg/Kg		160	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	84		70 - 130

Lab Sample ID: 880-7973-A-1-C MSD
Matrix: Solid
Analysis Batch: 11509

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 11444

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	<249	U F1 F2	1000	1220	F2	mg/Kg		122	70 - 130	27	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	90		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-11667/1-A
Matrix: Solid
Analysis Batch: 11702

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/09/21 03:48	1

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QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 880-11667/2-A
Matrix: Solid
Analysis Batch: 11702

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	256.9		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-11667/3-A
Matrix: Solid
Analysis Batch: 11702

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	259.3		mg/Kg		104	90 - 110	1	20

Lab Sample ID: 890-1526-1 MS
Matrix: Solid
Analysis Batch: 11702

Client Sample ID: SW10
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	6410	F1	2530	9341	F1	mg/Kg		116	90 - 110		

Lab Sample ID: 890-1526-1 MSD
Matrix: Solid
Analysis Batch: 11702

Client Sample ID: SW10
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6410	F1	2530	9322	F1	mg/Kg		115	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

GC VOA

Prep Batch: 11475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1526-1	SW10	Total/NA	Solid	5035	
890-1526-2	SW12	Total/NA	Solid	5035	
890-1526-3	SW13	Total/NA	Solid	5035	
890-1526-4	SW14	Total/NA	Solid	5035	
890-1526-5	SW15	Total/NA	Solid	5035	
890-1526-6	SW16	Total/NA	Solid	5035	
MB 880-11475/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11475/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11475/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1537-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-1537-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 11515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1526-1	SW10	Total/NA	Solid	8021B	11475
890-1526-2	SW12	Total/NA	Solid	8021B	11475
890-1526-3	SW13	Total/NA	Solid	8021B	11475
890-1526-4	SW14	Total/NA	Solid	8021B	11475
890-1526-5	SW15	Total/NA	Solid	8021B	11475
890-1526-6	SW16	Total/NA	Solid	8021B	11475
MB 880-11475/5-A	Method Blank	Total/NA	Solid	8021B	11475
LCS 880-11475/1-A	Lab Control Sample	Total/NA	Solid	8021B	11475
LCSD 880-11475/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11475
890-1537-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	11475
890-1537-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	11475

Analysis Batch: 11588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1526-1	SW10	Total/NA	Solid	Total BTEX	
890-1526-2	SW12	Total/NA	Solid	Total BTEX	
890-1526-3	SW13	Total/NA	Solid	Total BTEX	
890-1526-4	SW14	Total/NA	Solid	Total BTEX	
890-1526-5	SW15	Total/NA	Solid	Total BTEX	
890-1526-6	SW16	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 11444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1526-1	SW10	Total/NA	Solid	8015NM Prep	
890-1526-2	SW12	Total/NA	Solid	8015NM Prep	
890-1526-3	SW13	Total/NA	Solid	8015NM Prep	
890-1526-4	SW14	Total/NA	Solid	8015NM Prep	
890-1526-5	SW15	Total/NA	Solid	8015NM Prep	
890-1526-6	SW16	Total/NA	Solid	8015NM Prep	
MB 880-11444/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-11444/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-11444/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-7973-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-7973-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

GC Semi VOA

Analysis Batch: 11509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1526-1	SW10	Total/NA	Solid	8015B NM	11444
890-1526-2	SW12	Total/NA	Solid	8015B NM	11444
890-1526-3	SW13	Total/NA	Solid	8015B NM	11444
890-1526-4	SW14	Total/NA	Solid	8015B NM	11444
890-1526-5	SW15	Total/NA	Solid	8015B NM	11444
890-1526-6	SW16	Total/NA	Solid	8015B NM	11444
MB 880-11444/1-A	Method Blank	Total/NA	Solid	8015B NM	11444
LCS 880-11444/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	11444
LCSD 880-11444/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	11444
880-7973-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	11444
880-7973-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	11444

Analysis Batch: 11598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1526-1	SW10	Total/NA	Solid	8015 NM	
890-1526-2	SW12	Total/NA	Solid	8015 NM	
890-1526-3	SW13	Total/NA	Solid	8015 NM	
890-1526-4	SW14	Total/NA	Solid	8015 NM	
890-1526-5	SW15	Total/NA	Solid	8015 NM	
890-1526-6	SW16	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 11667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1526-1	SW10	Soluble	Solid	DI Leach	
890-1526-2	SW12	Soluble	Solid	DI Leach	
890-1526-3	SW13	Soluble	Solid	DI Leach	
890-1526-4	SW14	Soluble	Solid	DI Leach	
890-1526-5	SW15	Soluble	Solid	DI Leach	
890-1526-6	SW16	Soluble	Solid	DI Leach	
MB 880-11667/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11667/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11667/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1526-1 MS	SW10	Soluble	Solid	DI Leach	
890-1526-1 MSD	SW10	Soluble	Solid	DI Leach	

Analysis Batch: 11702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1526-1	SW10	Soluble	Solid	300.0	11667
890-1526-2	SW12	Soluble	Solid	300.0	11667
890-1526-3	SW13	Soluble	Solid	300.0	11667
890-1526-4	SW14	Soluble	Solid	300.0	11667
890-1526-5	SW15	Soluble	Solid	300.0	11667
890-1526-6	SW16	Soluble	Solid	300.0	11667
MB 880-11667/1-A	Method Blank	Soluble	Solid	300.0	11667
LCS 880-11667/2-A	Lab Control Sample	Soluble	Solid	300.0	11667
LCSD 880-11667/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11667
890-1526-1 MS	SW10	Soluble	Solid	300.0	11667
890-1526-1 MSD	SW10	Soluble	Solid	300.0	11667

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

Client Sample ID: SW10

Lab Sample ID: 890-1526-1
Matrix: Solid
Date Collected: 10/27/21 10:20
Date Received: 11/03/21 16:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11475	11/05/21 09:00	MR	XEN MID
Total/NA	Analysis	8021B		1	11515	11/05/21 14:08	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	11588	11/05/21 13:34	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11598	11/05/21 13:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11444	11/04/21 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11509	11/05/21 14:11	AJ	XEN MID
Soluble	Leach	DI Leach			11667	11/08/21 11:05	CH	XEN MID
Soluble	Analysis	300.0		10	11702	11/09/21 04:11	CH	XEN MID

Client Sample ID: SW12

Lab Sample ID: 890-1526-2
Matrix: Solid
Date Collected: 10/27/21 10:23
Date Received: 11/03/21 16:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11475	11/05/21 09:00	MR	XEN MID
Total/NA	Analysis	8021B		1	11515	11/05/21 14:29	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	11588	11/05/21 13:34	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11598	11/05/21 13:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11444	11/04/21 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11509	11/05/21 14:33	AJ	XEN MID
Soluble	Leach	DI Leach			11667	11/08/21 11:05	CH	XEN MID
Soluble	Analysis	300.0		5	11702	11/09/21 04:34	CH	XEN MID

Client Sample ID: SW13

Lab Sample ID: 890-1526-3
Matrix: Solid
Date Collected: 10/27/21 10:28
Date Received: 11/03/21 16:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11475	11/05/21 09:00	MR	XEN MID
Total/NA	Analysis	8021B		1	11515	11/05/21 14:49	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	11588	11/05/21 13:34	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11598	11/05/21 13:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11444	11/04/21 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11509	11/05/21 14:54	AJ	XEN MID
Soluble	Leach	DI Leach			11667	11/08/21 11:05	CH	XEN MID
Soluble	Analysis	300.0		20	11702	11/09/21 04:41	CH	XEN MID

Client Sample ID: SW14

Lab Sample ID: 890-1526-4
Matrix: Solid
Date Collected: 10/28/21 10:29
Date Received: 11/03/21 16:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11475	11/05/21 09:00	MR	XEN MID
Total/NA	Analysis	8021B		1	11515	11/05/21 15:10	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	11588	11/05/21 13:34	AJ	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

Client Sample ID: SW14

Lab Sample ID: 890-1526-4
Matrix: Solid
Date Collected: 10/28/21 10:29
Date Received: 11/03/21 16:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	11598	11/05/21 13:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11444	11/04/21 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11509	11/05/21 15:17	AJ	XEN MID
Soluble	Leach	DI Leach			11667	11/08/21 11:05	CH	XEN MID
Soluble	Analysis	300.0		10	11702	11/09/21 04:49	CH	XEN MID

Client Sample ID: SW15

Lab Sample ID: 890-1526-5
Matrix: Solid
Date Collected: 10/29/21 10:29
Date Received: 11/03/21 16:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11475	11/05/21 09:00	MR	XEN MID
Total/NA	Analysis	8021B		1	11515	11/05/21 15:30	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	11588	11/05/21 13:34	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11598	11/05/21 13:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11444	11/04/21 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11509	11/05/21 15:39	AJ	XEN MID
Soluble	Leach	DI Leach			11667	11/08/21 11:05	CH	XEN MID
Soluble	Analysis	300.0		20	11702	11/09/21 04:57	CH	XEN MID

Client Sample ID: SW16

Lab Sample ID: 890-1526-6
Matrix: Solid
Date Collected: 10/30/21 10:30
Date Received: 11/03/21 16:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11475	11/05/21 09:00	MR	XEN MID
Total/NA	Analysis	8021B		1	11515	11/05/21 15:51	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	11588	11/05/21 13:34	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11598	11/05/21 13:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11444	11/04/21 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11509	11/05/21 16:01	AJ	XEN MID
Soluble	Leach	DI Leach			11667	11/08/21 11:05	CH	XEN MID
Soluble	Analysis	300.0		10	11702	11/09/21 05:20	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

Laboratory: Eurofins Xenco, 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 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

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 Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: WSP USA Inc.
Project/Site: PLU 78 B

Job ID: 890-1526-1
SDG: 31403236.20.0129

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1526-1	SW10	Solid	10/27/21 10:20	11/03/21 16:54	0 - 4
890-1526-2	SW12	Solid	10/27/21 10:23	11/03/21 16:54	0 - 4
890-1526-3	SW13	Solid	10/27/21 10:28	11/03/21 16:54	0 - 4
890-1526-4	SW14	Solid	10/28/21 10:29	11/03/21 16:54	0 - 4
890-1526-5	SW15	Solid	10/29/21 10:29	11/03/21 16:54	0 - 4
890-1526-6	SW16	Solid	10/30/21 10:30	11/03/21 16:54	0 - 4

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:	Tacoma Morrissey	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A St. Bldg 1, Unit 222	Address:	3104 E Greene St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	(432) 704-5178 Email:		travis.casey@wsp.com, kalei.jennings@wsp.com, dan.moir@w

Work Order Comments

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

Project Name:	PLU 78 B	Turn Around	
Project Number:	31403236.020.0129	Routine	
P.O. Number:		Rush: 24hr.	
Sampler's Name:	Travis Casey	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

Work Order Notes

IN:NAPP2126639352
CC:1080781001
API:30-015-27536

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
SW10	S	10/27/2021	10:20	0-4	1	x	x	x	Composite
SW12	S	10/27/2021	10:23	0-4	1	x	x	x	Composite
SW13	S	10/27/2021	10:28	0-4	1	x	x	x	Composite
SW14	S	10/28/2021	10:29	0-4	1	x	x	x	Composite
SW15	S	10/29/2021	10:29	0-4	1	x	x	x	Composite
SW16	S	10/30/2021	10:30	0-4	1	x	x	x	Composite

890-1526 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag 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		11-3-21 1654	2		
3			4		
5			6		

Revised Date 051418 Rev 2018.1

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-495 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-1526-1
Address: 1211 W Florida Ave,	Due Date Requested: 11/5/2021			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: PLU 78 B	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
SW10 (890-1526-1)	10/27/21	10 20 Mountain		Solid			X	X	X	X	X	1	
SW12 (890-1526-2)	10/27/21	10 23 Mountain		Solid			X	X	X	X	X	1	
SW13 (890-1526-3)	10/27/21	10 28 Mountain		Solid			X	X	X	X	X	1	
SW14 (890-1526-4)	10/28/21	10 29 Mountain		Solid			X	X	X	X	X	1	
SW15 (890-1526-5)	10/29/21	10 29 Mountain		Solid			X	X	X	X	X	1	
SW16 (890-1526-6)	10/30/21	10 30 Mountain		Solid			X	X	X	X	X	1	

Note Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by: Cloe Cist 11.4.21	Date/Time	Company	Received by: J Kramek	Date/Time 11 5 21	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time 1304	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time.	Company

Custody Seals Intact	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.
Δ Yes Δ No		4 6/4.7

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1526-1
SDG Number: 31403236.20.0129

Login Number: 1526
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, 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: 890-1526-1
SDG Number: 31403236.20.0129

Login Number: 1526
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland
List Creation: 11/05/21 01:13 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.6/4.7
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 Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-1555-1
Laboratory Sample Delivery Group: 31403236.020.0129
Client Project/Site: PLU 78

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

Attn: Kalei Jennings

Authorized for release by:
11/11/2021 7:17:34 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 78

Laboratory Job ID: 890-1555-1
SDG: 31403236.020.0129

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1555-1
Project/Site: PLU 78 SDG: 31403236.020.0129

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1555-1
SDG: 31403236.020.0129

Job ID: 890-1555-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1555-1

Receipt
The samples were received on 11/10/2021 11:23 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 9.6°C

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

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

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1555-1
SDG: 31403236.020.0129

Client Sample ID: FS11

Lab Sample ID: 890-1555-1
Matrix: Solid
Date Collected: 11/10/21 09:02
Date Received: 11/10/21 11:23
Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/11/21 08:57	11/11/21 12:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/11/21 08:57	11/11/21 12:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/11/21 08:57	11/11/21 12:45	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/11/21 08:57	11/11/21 12:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/11/21 08:57	11/11/21 12:45	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/11/21 08:57	11/11/21 12:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*11/11/21 08:57*	*11/11/21 12:45*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*11/11/21 08:57*	*11/11/21 12:45*	*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			11/11/21 14:02	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			11/11/21 15:00	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		11/11/21 08:21	11/11/21 11:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/11/21 08:21	11/11/21 11:51	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/11/21 08:21	11/11/21 11:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*11/11/21 08:21*	*11/11/21 11:51*	*1*
o-Terphenyl	*121*		*70 - 130*	*11/11/21 08:21*	*11/11/21 11:51*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13500**		99.0		mg/Kg			11/11/21 16:42	20

Client Sample ID: FS12

Lab Sample ID: 890-1555-2
Matrix: Solid
Date Collected: 11/10/21 09:03
Date Received: 11/10/21 11:23
Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		11/11/21 08:57	11/11/21 13:06	1
Toluene	<0.00198	U	0.00198		mg/Kg		11/11/21 08:57	11/11/21 13:06	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		11/11/21 08:57	11/11/21 13:06	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		11/11/21 08:57	11/11/21 13:06	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		11/11/21 08:57	11/11/21 13:06	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		11/11/21 08:57	11/11/21 13:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*11/11/21 08:57*	*11/11/21 13:06*	*1*

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1555-1
SDG: 31403236.020.0129

Client Sample ID: FS12

Date Collected: 11/10/21 09:03
Date Received: 11/10/21 11:23
Sample Depth: 4

Lab Sample ID: 890-1555-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*11/11/21 08:57*	*11/11/21 13:06*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			11/11/21 14:02	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			11/11/21 15:00	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		11/11/21 08:21	11/11/21 12:55	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/11/21 08:21	11/11/21 12:55	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/11/21 08:21	11/11/21 12:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*11/11/21 08:21*	*11/11/21 12:55*	*1*
o-Terphenyl	*102*		*70 - 130*	*11/11/21 08:21*	*11/11/21 12:55*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21300**		253		mg/Kg			11/11/21 17:04	50

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1555-1
SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1555-1	FS11	125	79
890-1555-1 MS	FS11	117	113
890-1555-1 MSD	FS11	116	101
890-1555-2	FS12	78	79
LCS 880-11996/1-A	Lab Control Sample	109	102
LCSD 880-11996/2-A	Lab Control Sample Dup	113	102
MB 880-11996/5-A	Method Blank	128	102

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1555-1	FS11	109	121
890-1555-1 MS	FS11	100	99
890-1555-2	FS12	98	102
LCS 880-11990/2-A	Lab Control Sample	84	93
LCSD 880-11990/3-A	Lab Control Sample Dup	83	86
MB 880-11990/1-A	Method Blank	106	127

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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID		
890-1555-1 MSD	FS11		

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1555-1
SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-11996/5-A
Matrix: Solid
Analysis Batch: 11997

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11996

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/11/21 08:57	11/11/21 12:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/11/21 08:57	11/11/21 12:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/11/21 08:57	11/11/21 12:17	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/11/21 08:57	11/11/21 12:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/11/21 08:57	11/11/21 12:17	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/11/21 08:57	11/11/21 12:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*11/11/21 08:57*	*11/11/21 12:17*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*11/11/21 08:57*	*11/11/21 12:17*	*1*

Lab Sample ID: LCS 880-11996/1-A
Matrix: Solid
Analysis Batch: 11997

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11996

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08647		mg/Kg		86	70 - 130		
Toluene			0.100	0.09691		mg/Kg		97	70 - 130		
Ethylbenzene			0.100	0.09479		mg/Kg		95	70 - 130		
m-Xylene & p-Xylene			0.200	0.1868		mg/Kg		93	70 - 130		
o-Xylene			0.100	0.09441		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-11996/2-A
Matrix: Solid
Analysis Batch: 11997

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11996

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09356		mg/Kg		94	70 - 130	8	35
Toluene			0.100	0.09366		mg/Kg		94	70 - 130	3	35
Ethylbenzene			0.100	0.09798		mg/Kg		98	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1966		mg/Kg		98	70 - 130	5	35
o-Xylene			0.100	0.09688		mg/Kg		97	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 890-1555-1 MSD
Matrix: Solid
Analysis Batch: 11997

Client Sample ID: FS11
Prep Type: Total/NA
Prep Batch: 11996

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0994	0.08915		mg/Kg					
Toluene	<0.00200	U	0.0994	0.09820		mg/Kg					

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1555-1
SDG: 31403236.020.0129

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

Lab Sample ID: 890-1555-1 MSD
Matrix: Solid
Analysis Batch: 11997

Client Sample ID: FS11
Prep Type: Total/NA
Prep Batch: 11996

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene	<0.00200	U	0.0994	0.1013		mg/Kg					
m-Xylene & p-Xylene	<0.00399	U	0.199	0.2015		mg/Kg					
o-Xylene	<0.00200	U	0.0994	0.1024		mg/Kg					

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-1555-1 MS
Matrix: Solid
Analysis Batch: 11997

Client Sample ID: FS11
Prep Type: Total/NA

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

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

Lab Sample ID: MB 880-11990/1-A
Matrix: Solid
Analysis Batch: 11992

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11990

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/11/21 08:21	11/11/21 09:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/11/21 08:21	11/11/21 09:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/11/21 08:21	11/11/21 09:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*11/11/21 08:21*	*11/11/21 09:47*	*1*
o-Terphenyl	*127*		*70 - 130*	*11/11/21 08:21*	*11/11/21 09:47*	*1*

Lab Sample ID: LCS 880-11990/2-A
Matrix: Solid
Analysis Batch: 11992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11990

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	895.5		mg/Kg		90	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	900.5		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*84*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1555-1
SDG: 31403236.020.0129

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

Lab Sample ID: LCSD 880-11990/3-A
Matrix: Solid
Analysis Batch: 11992

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11990

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	918.9		mg/Kg		92	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	870.9		mg/Kg		87	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*83*		*70 - 130*
o-Terphenyl	*86*		*70 - 130*

Lab Sample ID: 890-1555-1 MS
Matrix: Solid
Analysis Batch: 11992

Client Sample ID: FS11
Prep Type: Total/NA
Prep Batch: 11990

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1100		mg/Kg		108	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	997	793.8		mg/Kg		77	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*99*		*70 - 130*

Lab Sample ID: 890-1555-1 MSD
Matrix: Solid
Analysis Batch: 11992

Client Sample ID: FS11
Prep Type: Total/NA
Prep Batch: 11990

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					
Diesel Range Organics (Over C10-C28)	<50.0	U	998	849.1		mg/Kg					

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane			
o-Terphenyl			

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-12024/1-A
Matrix: Solid
Analysis Batch: 12046

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/11/21 15:36	1

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1555-1
SDG: 31403236.020.0129

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-12024/2-A
Matrix: Solid
Analysis Batch: 12046

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	258.0		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-12024/3-A
Matrix: Solid
Analysis Batch: 12046

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	257.6		mg/Kg		103	90 - 110	0	20

Lab Sample ID: 880-8189-A-1-E MS
Matrix: Solid
Analysis Batch: 12046

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	3170		1240	4348		mg/Kg		95	90 - 110		

Lab Sample ID: 880-8189-A-1-F MSD
Matrix: Solid
Analysis Batch: 12046

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	3170		1240	4351		mg/Kg		96	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1555-1
SDG: 31403236.020.0129

GC VOA

Prep Batch: 11996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1555-1	FS11	Total/NA	Solid	5035	
890-1555-2	FS12	Total/NA	Solid	5035	
MB 880-11996/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11996/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11996/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1555-1 MSD	FS11	Total/NA	Solid	5035	

Analysis Batch: 11997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1555-1	FS11	Total/NA	Solid	8021B	11996
890-1555-2	FS12	Total/NA	Solid	8021B	11996
MB 880-11996/5-A	Method Blank	Total/NA	Solid	8021B	11996
LCS 880-11996/1-A	Lab Control Sample	Total/NA	Solid	8021B	11996
LCSD 880-11996/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11996
890-1555-1 MS	FS11	Total/NA	Solid	8021B	
890-1555-1 MSD	FS11	Total/NA	Solid	8021B	11996

Analysis Batch: 12040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1555-1	FS11	Total/NA	Solid	Total BTEX	
890-1555-2	FS12	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 11990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1555-1	FS11	Total/NA	Solid	8015NM Prep	
890-1555-2	FS12	Total/NA	Solid	8015NM Prep	
MB 880-11990/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-11990/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-11990/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1555-1 MS	FS11	Total/NA	Solid	8015NM Prep	
890-1555-1 MSD	FS11	Total/NA	Solid	8015NM Prep	

Analysis Batch: 11992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1555-1	FS11	Total/NA	Solid	8015B NM	11990
890-1555-2	FS12	Total/NA	Solid	8015B NM	11990
MB 880-11990/1-A	Method Blank	Total/NA	Solid	8015B NM	11990
LCS 880-11990/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	11990
LCSD 880-11990/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	11990
890-1555-1 MS	FS11	Total/NA	Solid	8015B NM	11990
890-1555-1 MSD	FS11	Total/NA	Solid	8015B NM	11990

Analysis Batch: 12045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1555-1	FS11	Total/NA	Solid	8015 NM	
890-1555-2	FS12	Total/NA	Solid	8015 NM	

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1555-1
SDG: 31403236.020.0129

HPLC/IC

Leach Batch: 12024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1555-1	FS11	Soluble	Solid	DI Leach	
890-1555-2	FS12	Soluble	Solid	DI Leach	
MB 880-12024/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-12024/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-12024/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-8189-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-8189-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 12046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1555-1	FS11	Soluble	Solid	300.0	12024
890-1555-2	FS12	Soluble	Solid	300.0	12024
MB 880-12024/1-A	Method Blank	Soluble	Solid	300.0	12024
LCS 880-12024/2-A	Lab Control Sample	Soluble	Solid	300.0	12024
LCSD 880-12024/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	12024
880-8189-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	12024
880-8189-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	12024

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1555-1
SDG: 31403236.020.0129

Client Sample ID: FS11

Date Collected: 11/10/21 09:02
Date Received: 11/10/21 11:23

Lab Sample ID: 890-1555-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11996	11/11/21 08:57	KL	XEN MID
Total/NA	Analysis	8021B		1	11997	11/11/21 12:45	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	12040	11/11/21 14:02	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	12045	11/11/21 15:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11990	11/11/21 08:21	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11992	11/11/21 11:51	AJ	XEN MID
Soluble	Leach	DI Leach			12024	11/11/21 13:00	CH	XEN MID
Soluble	Analysis	300.0		20	12046	11/11/21 16:42	SC	XEN MID

Client Sample ID: FS12

Date Collected: 11/10/21 09:03
Date Received: 11/10/21 11:23

Lab Sample ID: 890-1555-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11996	11/11/21 08:57	KL	XEN MID
Total/NA	Analysis	8021B		1	11997	11/11/21 13:06	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	12040	11/11/21 14:02	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	12045	11/11/21 15:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11990	11/11/21 08:21	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11992	11/11/21 12:55	AJ	XEN MID
Soluble	Leach	DI Leach			12024	11/11/21 13:00	CH	XEN MID
Soluble	Analysis	300.0		50	12046	11/11/21 17:04	SC	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-1555-1
Project/Site: PLU 78 SDG: 31403236.020.0129

Laboratory: Eurofins Xenco, 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: 890-1555-1
Project/Site: PLU 78 SDG: 31403236.020.0129

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 Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1555-1
SDG: 31403236.020.0129

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1555-1	FS11	Solid	11/10/21 09:02	11/10/21 11:23	4
890-1555-2	FS12	Solid	11/10/21 09:03	11/10/21 11:23	4

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: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Adrian Baker
Company Name:	WSP USA Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A St. Bldg 1, Unit 222	Address:	3104 E Greene St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	(432) 704-5178	Email:	travis.casey@wsp.com, kalei.jennings@wsp.com, dan.moir@w

Work Order Comments

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

Project Name:	PLU 78	Turn Around	
Project Number:	31403236.020.0129	Routine	
P.O. Number:		Rush: 24hr	
Sampler's Name:	Travis Casey	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	9.8/9.6	Thermometer ID	TUM-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:	CP

ANALYSIS REQUEST

Work Order Notes

IN:NAPP2126639352
CC:1080781001
API:30-015-27536

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

890-1555 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
FS11	S	11/10/2021	0902	4	1	x	x	x	Composite
FS12	S	11/10/2021	0903	4	1	x	x	x	Composite

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		11.10.21 1123	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018 1

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s).	COC No: 890-502 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-1555-1
Address: 1211 W Florida Ave	Due Date Requested: 11/11/2021			
City: Midland	TAT Requested (days)			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: PLU 78	Project #: 89000004			
Site	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8016MOD_NM/8016NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note
			Preservation Code:										
FS11 (890-1555-1)	11/10/21	09 02 Mountain		Solid			X	X	X	X	X	1	
FS12 (890-1555-2)	11/10/21	09 03 Mountain		Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

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

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Clee Ant 11-10-21	Date/Time.		Officer	11/11/21 1125	
2	Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
3	Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks. 32/33

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1555-1
SDG Number: 31403236.020.0129

Login Number: 1555
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, 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: 890-1555-1
SDG Number: 31403236.020.0129

Login Number: 1555
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland
List Creation: 11/11/21 11:49 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-1557-1
Laboratory Sample Delivery Group: 31403236.020.0129
Client Project/Site: PLU 78

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
11/15/2021 8:12:43 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 78

Laboratory Job ID: 890-1557-1
SDG: 31403236.020.0129

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1557-1
Project/Site: PLU 78 SDG: 31403236.020.0129

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

Job ID: 890-1557-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1557-1

Receipt
The samples were received on 11/10/2021 11:23 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 9.6°C

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: FS04 (890-1557-4) and (MB 880-11984/5-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-11991 and analytical batch 880-11994 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS01 (890-1557-1), FS02 (890-1557-2), FS03 (890-1557-3), FS05 (890-1557-5), FS06 (890-1557-6), FS09 (890-1557-9) and FS10 (890-1557-10). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (MB 880-11991/1-A). Evidence of matrix interferences is not obvious.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-11932 and 880-11932 and analytical batch 880-12195 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 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

Client Sample ID: FS01

Lab Sample ID: 890-1557-1
Matrix: Solid
Date Collected: 11/10/21 08:51
Date Received: 11/10/21 11:23
Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 13:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 13:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 13:33	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/11/21 07:52	11/11/21 13:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 13:33	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/11/21 07:52	11/11/21 13:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*11/11/21 07:52*	*11/11/21 13:33*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*11/11/21 07:52*	*11/11/21 13:33*	*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			11/11/21 14:14	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			11/11/21 15:00	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 F1	49.9		mg/Kg		11/11/21 08:22	11/11/21 11:51	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/11/21 08:22	11/11/21 11:51	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/11/21 08:22	11/11/21 11:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*140*	*S1+*	*70 - 130*	*11/11/21 08:22*	*11/11/21 11:51*	*1*
o-Terphenyl	*161*	*S1+*	*70 - 130*	*11/11/21 08:22*	*11/11/21 11:51*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**700**		4.98		mg/Kg			11/11/21 18:11	1

Client Sample ID: FS02

Lab Sample ID: 890-1557-2
Matrix: Solid
Date Collected: 11/10/21 08:52
Date Received: 11/10/21 11:23
Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		11/11/21 07:52	11/11/21 14:01	1
Toluene	<0.00198	U	0.00198		mg/Kg		11/11/21 07:52	11/11/21 14:01	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		11/11/21 07:52	11/11/21 14:01	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		11/11/21 07:52	11/11/21 14:01	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		11/11/21 07:52	11/11/21 14:01	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		11/11/21 07:52	11/11/21 14:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*11/11/21 07:52*	*11/11/21 14:01*	*1*

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

Client Sample ID: FS02

Lab Sample ID: 890-1557-2
Matrix: Solid
Date Collected: 11/10/21 08:52
Date Received: 11/10/21 11:23
Sample Depth: 4

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*11/11/21 07:52*	*11/11/21 14:01*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			11/11/21 14:14	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			11/11/21 15:00	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		11/11/21 08:22	11/11/21 12:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/11/21 08:22	11/11/21 12:55	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/11/21 08:22	11/11/21 12:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*11/11/21 08:22*	*11/11/21 12:55*	*1*
o-Terphenyl	*137*	*S1+*	*70 - 130*	*11/11/21 08:22*	*11/11/21 12:55*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**709**		4.97	mg/Kg			11/11/21 18:33	1

Client Sample ID: FS03

Lab Sample ID: 890-1557-3
Matrix: Solid
Date Collected: 11/10/21 08:53
Date Received: 11/10/21 11:23
Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		11/11/21 07:52	11/11/21 14:28	1
Toluene	<0.00202	U	0.00202	mg/Kg		11/11/21 07:52	11/11/21 14:28	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		11/11/21 07:52	11/11/21 14:28	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		11/11/21 07:52	11/11/21 14:28	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		11/11/21 07:52	11/11/21 14:28	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		11/11/21 07:52	11/11/21 14:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*11/11/21 07:52*	*11/11/21 14:28*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*11/11/21 07:52*	*11/11/21 14:28*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			11/11/21 14:14	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			11/11/21 15:00	1

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Client Sample Results

Client: WSP USA Inc. Job ID: 890-1557-1
Project/Site: PLU 78 SDG: 31403236.020.0129

Client Sample ID: FS03 Lab Sample ID: 890-1557-3

Date Collected: 11/10/21 08:53 **Matrix: Solid**
Date Received: 11/10/21 11:23
Sample Depth: 4

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		11/11/21 08:22	11/11/21 13:16	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/11/21 08:22	11/11/21 13:16	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/11/21 08:22	11/11/21 13:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*125*		*70 - 130*	*11/11/21 08:22*	*11/11/21 13:16*	*1*
o-Terphenyl	*141*	*S1+*	*70 - 130*	*11/11/21 08:22*	*11/11/21 13:16*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14100**		100		mg/Kg			11/11/21 18:40	20

Client Sample ID: FS04 Lab Sample ID: 890-1557-4

Date Collected: 11/10/21 08:55 **Matrix: Solid**
Date Received: 11/10/21 11:23
Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/11/21 07:52	11/11/21 14:56	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/11/21 07:52	11/11/21 14:56	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/11/21 07:52	11/11/21 14:56	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/11/21 07:52	11/11/21 14:56	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/11/21 07:52	11/11/21 14:56	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/11/21 07:52	11/11/21 14:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*183*	*S1+*	*70 - 130*	*11/11/21 07:52*	*11/11/21 14:56*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*11/11/21 07:52*	*11/11/21 14:56*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/11/21 14:14	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			11/11/21 15:00	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		11/11/21 08:22	11/11/21 13:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/11/21 08:22	11/11/21 13:38	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/11/21 08:22	11/11/21 13:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*11/11/21 08:22*	*11/11/21 13:38*	*1*
o-Terphenyl	*130*		*70 - 130*	*11/11/21 08:22*	*11/11/21 13:38*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

Client Sample ID: FS04

Lab Sample ID: 890-1557-4
Matrix: Solid
Date Collected: 11/10/21 08:55
Date Received: 11/10/21 11:23
Sample Depth: 4

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9540**		49.9		mg/Kg			11/11/21 18:48	10

Client Sample ID: FS05

Lab Sample ID: 890-1557-5
Matrix: Solid
Date Collected: 11/10/21 08:56
Date Received: 11/10/21 11:23
Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 15:23	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 15:23	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 15:23	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/11/21 07:52	11/11/21 15:23	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 15:23	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/11/21 07:52	11/11/21 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*11/11/21 07:52*	*11/11/21 15:23*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*11/11/21 07:52*	*11/11/21 15:23*	*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			11/11/21 14:14	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**93.6**		49.9		mg/Kg			11/11/21 15:00	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		11/11/21 08:22	11/11/21 13:59	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/11/21 08:22	11/11/21 13:59	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/11/21 08:22	11/11/21 13:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*127*		*70 - 130*	*11/11/21 08:22*	*11/11/21 13:59*	*1*
o-Terphenyl	*140*	*S1+*	*70 - 130*	*11/11/21 08:22*	*11/11/21 13:59*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**740**		4.95		mg/Kg			11/11/21 18:55	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

Client Sample ID: FS06

Lab Sample ID: 890-1557-6
Matrix: Solid
Date Collected: 11/10/21 08:57
Date Received: 11/10/21 11:23
Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 15:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 15:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 15:50	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/11/21 07:52	11/11/21 15:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 15:50	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/11/21 07:52	11/11/21 15:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*11/11/21 07:52*	*11/11/21 15:50*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*11/11/21 07:52*	*11/11/21 15:50*	*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			11/11/21 14:14	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			11/11/21 15:00	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		11/11/21 08:22	11/11/21 14:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/11/21 08:22	11/11/21 14:21	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/11/21 08:22	11/11/21 14:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*131*	*S1+*	*70 - 130*	*11/11/21 08:22*	*11/11/21 14:21*	*1*
o-Terphenyl	*141*	*S1+*	*70 - 130*	*11/11/21 08:22*	*11/11/21 14:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**635**		5.02		mg/Kg			11/11/21 19:03	1

Client Sample ID: FS07

Lab Sample ID: 890-1557-7
Matrix: Solid
Date Collected: 11/10/21 08:58
Date Received: 11/10/21 11:23
Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 16:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 16:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 16:17	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/11/21 07:52	11/11/21 16:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 16:17	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/11/21 07:52	11/11/21 16:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*11/11/21 07:52*	*11/11/21 16:17*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

Client Sample ID: FS07

Lab Sample ID: 890-1557-7
Matrix: Solid
Date Collected: 11/10/21 08:58
Date Received: 11/10/21 11:23
Sample Depth: 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*11/11/21 07:52*	*11/11/21 16:17*	*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			11/11/21 14:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			11/11/21 15:00	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		11/11/21 08:22	11/11/21 14:42	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		11/11/21 08:22	11/11/21 14:42	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		11/11/21 08:22	11/11/21 14:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*111*		*70 - 130*	*11/11/21 08:22*	*11/11/21 14:42*	*1*
o-Terphenyl	*125*		*70 - 130*	*11/11/21 08:22*	*11/11/21 14:42*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**888**		4.97	mg/Kg			11/11/21 19:10	1

Client Sample ID: FS08

Lab Sample ID: 890-1557-8
Matrix: Solid
Date Collected: 11/10/21 08:59
Date Received: 11/10/21 11:23
Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		11/11/21 07:52	11/11/21 16:56	1
Toluene	<0.00202	U	0.00202	mg/Kg		11/11/21 07:52	11/11/21 16:56	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		11/11/21 07:52	11/11/21 16:56	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		11/11/21 07:52	11/11/21 16:56	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		11/11/21 07:52	11/11/21 16:56	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		11/11/21 07:52	11/11/21 16:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*186*	*S1+*	*70 - 130*	*11/11/21 07:52*	*11/11/21 16:56*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*11/11/21 07:52*	*11/11/21 16:56*	*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			11/11/21 14:14	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			11/11/21 15:00	1

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Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

Client Sample ID: FS08

Lab Sample ID: 890-1557-8
Matrix: Solid
Date Collected: 11/10/21 08:59
Date Received: 11/10/21 11:23
Sample Depth: 4

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		11/11/21 08:22	11/11/21 15:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/11/21 08:22	11/11/21 15:04	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/11/21 08:22	11/11/21 15:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*11/11/21 08:22*	*11/11/21 15:04*	*1*
o-Terphenyl	*126*		*70 - 130*	*11/11/21 08:22*	*11/11/21 15:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7570**		50.0		mg/Kg			11/15/21 12:59	10

Client Sample ID: FS09

Lab Sample ID: 890-1557-9
Matrix: Solid
Date Collected: 11/10/21 09:00
Date Received: 11/10/21 11:23
Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/11/21 07:52	11/11/21 17:21	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/11/21 07:52	11/11/21 17:21	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/11/21 07:52	11/11/21 17:21	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/11/21 07:52	11/11/21 17:21	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/11/21 07:52	11/11/21 17:21	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/11/21 07:52	11/11/21 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*11/11/21 07:52*	*11/11/21 17:21*	*1*
1,4-Difluorobenzene (Surr)	*119*		*70 - 130*	*11/11/21 07:52*	*11/11/21 17:21*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/11/21 14:14	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			11/11/21 15:00	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		11/11/21 08:22	11/11/21 15:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/11/21 08:22	11/11/21 15:25	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/11/21 08:22	11/11/21 15:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*127*		*70 - 130*	*11/11/21 08:22*	*11/11/21 15:25*	*1*
o-Terphenyl	*135*	*S1+*	*70 - 130*	*11/11/21 08:22*	*11/11/21 15:25*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

Client Sample ID: FS09

Lab Sample ID: 890-1557-9
Matrix: Solid
Date Collected: 11/10/21 09:00
Date Received: 11/10/21 11:23
Sample Depth: 4

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20400		99.8		mg/Kg			11/15/21 13:04	20

Client Sample ID: FS10

Lab Sample ID: 890-1557-10
Matrix: Solid
Date Collected: 11/10/21 09:01
Date Received: 11/10/21 11:23
Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 17:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 17:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 17:48	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/11/21 07:52	11/11/21 17:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 17:48	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/11/21 07:52	11/11/21 17:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*11/11/21 07:52*	*11/11/21 17:48*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*11/11/21 07:52*	*11/11/21 17:48*	*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			11/11/21 14:14	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			11/11/21 15:00	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		11/11/21 08:22	11/11/21 15:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/11/21 08:22	11/11/21 15:46	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/11/21 08:22	11/11/21 15:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*131*	*S1+*	*70 - 130*	*11/11/21 08:22*	*11/11/21 15:46*	*1*
o-Terphenyl	*143*	*S1+*	*70 - 130*	*11/11/21 08:22*	*11/11/21 15:46*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22600		250		mg/Kg			11/15/21 20:22	50

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1557-1	FS01	95	102
890-1557-1 MS	FS01	86	119
890-1557-1 MSD	FS01	85	116
890-1557-2	FS02	89	112
890-1557-3	FS03	90	112
890-1557-4	FS04	183 S1+	79
890-1557-5	FS05	97	116
890-1557-6	FS06	99	104
890-1557-7	FS07	95	103
890-1557-8	FS08	186 S1+	113
890-1557-9	FS09	113	119
890-1557-10	FS10	104	113
LCS 880-11984/1-A	Lab Control Sample	83	119
LCSD 880-11984/2-A	Lab Control Sample Dup	89	118
MB 880-11984/5-A	Method Blank	60 S1-	103

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1557-1	FS01	140 S1+	161 S1+
890-1557-1 MS	FS01	117	118
890-1557-1 MSD	FS01	118	119
890-1557-2	FS02	122	137 S1+
890-1557-3	FS03	125	141 S1+
890-1557-4	FS04	122	130
890-1557-5	FS05	127	140 S1+
890-1557-6	FS06	131 S1+	141 S1+
890-1557-7	FS07	111	125
890-1557-8	FS08	111	126
890-1557-9	FS09	127	135 S1+
890-1557-10	FS10	131 S1+	143 S1+
LCS 880-11991/2-A	Lab Control Sample	79	84
LCSD 880-11991/3-A	Lab Control Sample Dup	89	96
MB 880-11991/1-A	Method Blank	121	143 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-11984/5-A
Matrix: Solid
Analysis Batch: 11985

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11984

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 13:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 13:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 13:05	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/11/21 07:52	11/11/21 13:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/11/21 07:52	11/11/21 13:05	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/11/21 07:52	11/11/21 13:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*60*	*S1-*	*70 - 130*	*11/11/21 07:52*	*11/11/21 13:05*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*11/11/21 07:52*	*11/11/21 13:05*	*1*

Lab Sample ID: LCS 880-11984/1-A
Matrix: Solid
Analysis Batch: 11985

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11984

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09527		mg/Kg		95	70 - 130		
Toluene			0.100	0.07811		mg/Kg		78	70 - 130		
Ethylbenzene			0.100	0.08233		mg/Kg		82	70 - 130		
m-Xylene & p-Xylene			0.200	0.1779		mg/Kg		89	70 - 130		
o-Xylene			0.100	0.08999		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*
1,4-Difluorobenzene (Surr)	*119*		*70 - 130*

Lab Sample ID: LCSD 880-11984/2-A
Matrix: Solid
Analysis Batch: 11985

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11984

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1004		mg/Kg		100	70 - 130	5	35
Toluene			0.100	0.07784		mg/Kg		78	70 - 130	0	35
Ethylbenzene			0.100	0.08568		mg/Kg		86	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1845		mg/Kg		92	70 - 130	4	35
o-Xylene			0.100	0.09405		mg/Kg		94	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*

Lab Sample ID: 890-1557-1 MSD
Matrix: Solid
Analysis Batch: 11985

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 11984

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0994	0.09769		mg/Kg					
Toluene	<0.00200	U	0.0994	0.07506		mg/Kg					

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

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

Lab Sample ID: 890-1557-1 MSD
Matrix: Solid
Analysis Batch: 11985

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 11984

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene	<0.00200	U	0.0994	0.07663		mg/Kg					
m-Xylene & p-Xylene	<0.00400	U	0.199	0.1771		mg/Kg					
o-Xylene	<0.00200	U	0.0994	0.01040		mg/Kg					

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

Lab Sample ID: 890-1557-1 MS
Matrix: Solid
Analysis Batch: 11985

Client Sample ID: FS01
Prep Type: Total/NA

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*119*		*70 - 130*

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

Lab Sample ID: MB 880-11991/1-A
Matrix: Solid
Analysis Batch: 11994

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11991

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/11/21 08:22	11/11/21 09:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/11/21 08:22	11/11/21 09:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/11/21 08:22	11/11/21 09:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*11/11/21 08:22*	*11/11/21 09:47*	*1*
o-Terphenyl	*143*	*S1+*	*70 - 130*	*11/11/21 08:22*	*11/11/21 09:47*	*1*

Lab Sample ID: LCS 880-11991/2-A
Matrix: Solid
Analysis Batch: 11994

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11991

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1281		mg/Kg		128	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1011		mg/Kg		101	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*79*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

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

Lab Sample ID: LCSD 880-11991/3-A
Matrix: Solid
Analysis Batch: 11994

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11991

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1216		mg/Kg		122	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	943.3		mg/Kg		94	70 - 130	7	20

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

Lab Sample ID: 890-1557-1 MS
Matrix: Solid
Analysis Batch: 11994

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 11991

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	997	1600	F1	mg/Kg		160	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1097		mg/Kg		106	70 - 130		

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

Lab Sample ID: 890-1557-1 MSD
Matrix: Solid
Analysis Batch: 11994

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 11991

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	998	1611	F1	mg/Kg		161	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1109		mg/Kg		107	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*118*		*70 - 130*
o-Terphenyl	*119*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-12024/1-A
Matrix: Solid
Analysis Batch: 12046

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/11/21 15:36	1

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-12024/2-A
Matrix: Solid
Analysis Batch: 12046

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	258.0		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-12024/3-A
Matrix: Solid
Analysis Batch: 12046

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	257.6		mg/Kg		103	90 - 110	0	20

Lab Sample ID: 890-1556-A-6-G MS
Matrix: Solid
Analysis Batch: 12046

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	76.0		248	323.9		mg/Kg		100	90 - 110		

Lab Sample ID: 890-1556-A-6-H MSD
Matrix: Solid
Analysis Batch: 12046

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	76.0		248	317.8		mg/Kg		98	90 - 110	2	20

Lab Sample ID: MB 880-11932/1-A
Matrix: Solid
Analysis Batch: 12195

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/13/21 14:26	1

Lab Sample ID: LCS 880-11932/2-A
Matrix: Solid
Analysis Batch: 12195

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	248.3		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-11932/3-A
Matrix: Solid
Analysis Batch: 12195

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	249.8		mg/Kg		100	90 - 110	1	20

Lab Sample ID: 880-8274-A-2-C MS
Matrix: Solid
Analysis Batch: 12195

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	1680	F1	1240	2575	F1	mg/Kg		72	90 - 110		

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-8274-A-2-D MSD
Matrix: Solid
Analysis Batch: 12195

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	1680	F1	1250	2902		mg/Kg		97	90 - 110	12	20

Lab Sample ID: MB 880-12295/1-A
Matrix: Solid
Analysis Batch: 12337

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/15/21 14:19	1

Lab Sample ID: LCS 880-12295/2-A
Matrix: Solid
Analysis Batch: 12337

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	248.5		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-12295/3-A
Matrix: Solid
Analysis Batch: 12337

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	247.2		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-1571-A-5-H MS
Matrix: Solid
Analysis Batch: 12337

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	83.5		249	354.4		mg/Kg		109	90 - 110		

Lab Sample ID: 890-1571-A-5-I MSD
Matrix: Solid
Analysis Batch: 12337

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	83.5		249	339.9		mg/Kg		103	90 - 110	4	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

GC VOA

Prep Batch: 11984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1557-1	FS01	Total/NA	Solid	5035	
890-1557-2	FS02	Total/NA	Solid	5035	
890-1557-3	FS03	Total/NA	Solid	5035	
890-1557-4	FS04	Total/NA	Solid	5035	
890-1557-5	FS05	Total/NA	Solid	5035	
890-1557-6	FS06	Total/NA	Solid	5035	
890-1557-7	FS07	Total/NA	Solid	5035	
890-1557-8	FS08	Total/NA	Solid	5035	
890-1557-9	FS09	Total/NA	Solid	5035	
890-1557-10	FS10	Total/NA	Solid	5035	
MB 880-11984/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11984/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11984/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1557-1 MSD	FS01	Total/NA	Solid	5035	

Analysis Batch: 11985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1557-1	FS01	Total/NA	Solid	8021B	11984
890-1557-2	FS02	Total/NA	Solid	8021B	11984
890-1557-3	FS03	Total/NA	Solid	8021B	11984
890-1557-4	FS04	Total/NA	Solid	8021B	11984
890-1557-5	FS05	Total/NA	Solid	8021B	11984
890-1557-6	FS06	Total/NA	Solid	8021B	11984
890-1557-7	FS07	Total/NA	Solid	8021B	11984
890-1557-8	FS08	Total/NA	Solid	8021B	11984
890-1557-9	FS09	Total/NA	Solid	8021B	11984
890-1557-10	FS10	Total/NA	Solid	8021B	11984
MB 880-11984/5-A	Method Blank	Total/NA	Solid	8021B	11984
LCS 880-11984/1-A	Lab Control Sample	Total/NA	Solid	8021B	11984
LCSD 880-11984/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11984
890-1557-1 MS	FS01	Total/NA	Solid	8021B	
890-1557-1 MSD	FS01	Total/NA	Solid	8021B	11984

Analysis Batch: 12040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1557-1	FS01	Total/NA	Solid	Total BTEX	
890-1557-2	FS02	Total/NA	Solid	Total BTEX	
890-1557-3	FS03	Total/NA	Solid	Total BTEX	
890-1557-4	FS04	Total/NA	Solid	Total BTEX	
890-1557-5	FS05	Total/NA	Solid	Total BTEX	
890-1557-6	FS06	Total/NA	Solid	Total BTEX	
890-1557-7	FS07	Total/NA	Solid	Total BTEX	
890-1557-8	FS08	Total/NA	Solid	Total BTEX	
890-1557-9	FS09	Total/NA	Solid	Total BTEX	
890-1557-10	FS10	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 11991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1557-1	FS01	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

GC Semi VOA (Continued)

Prep Batch: 11991 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1557-2	FS02	Total/NA	Solid	8015NM Prep	
890-1557-3	FS03	Total/NA	Solid	8015NM Prep	
890-1557-4	FS04	Total/NA	Solid	8015NM Prep	
890-1557-5	FS05	Total/NA	Solid	8015NM Prep	
890-1557-6	FS06	Total/NA	Solid	8015NM Prep	
890-1557-7	FS07	Total/NA	Solid	8015NM Prep	
890-1557-8	FS08	Total/NA	Solid	8015NM Prep	
890-1557-9	FS09	Total/NA	Solid	8015NM Prep	
890-1557-10	FS10	Total/NA	Solid	8015NM Prep	
MB 880-11991/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-11991/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-11991/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1557-1 MS	FS01	Total/NA	Solid	8015NM Prep	
890-1557-1 MSD	FS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 11994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1557-1	FS01	Total/NA	Solid	8015B NM	11991
890-1557-2	FS02	Total/NA	Solid	8015B NM	11991
890-1557-3	FS03	Total/NA	Solid	8015B NM	11991
890-1557-4	FS04	Total/NA	Solid	8015B NM	11991
890-1557-5	FS05	Total/NA	Solid	8015B NM	11991
890-1557-6	FS06	Total/NA	Solid	8015B NM	11991
890-1557-7	FS07	Total/NA	Solid	8015B NM	11991
890-1557-8	FS08	Total/NA	Solid	8015B NM	11991
890-1557-9	FS09	Total/NA	Solid	8015B NM	11991
890-1557-10	FS10	Total/NA	Solid	8015B NM	11991
MB 880-11991/1-A	Method Blank	Total/NA	Solid	8015B NM	11991
LCS 880-11991/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	11991
LCSD 880-11991/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	11991
890-1557-1 MS	FS01	Total/NA	Solid	8015B NM	11991
890-1557-1 MSD	FS01	Total/NA	Solid	8015B NM	11991

Analysis Batch: 12045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1557-1	FS01	Total/NA	Solid	8015 NM	
890-1557-2	FS02	Total/NA	Solid	8015 NM	
890-1557-3	FS03	Total/NA	Solid	8015 NM	
890-1557-4	FS04	Total/NA	Solid	8015 NM	
890-1557-5	FS05	Total/NA	Solid	8015 NM	
890-1557-6	FS06	Total/NA	Solid	8015 NM	
890-1557-7	FS07	Total/NA	Solid	8015 NM	
890-1557-8	FS08	Total/NA	Solid	8015 NM	
890-1557-9	FS09	Total/NA	Solid	8015 NM	
890-1557-10	FS10	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 11932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1557-8	FS08	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

HPLC/IC (Continued)

Leach Batch: 11932 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1557-9	FS09	Soluble	Solid	DI Leach	
MB 880-11932/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11932/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11932/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-8274-A-2-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-8274-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 12024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1557-1	FS01	Soluble	Solid	DI Leach	
890-1557-2	FS02	Soluble	Solid	DI Leach	
890-1557-3	FS03	Soluble	Solid	DI Leach	
890-1557-4	FS04	Soluble	Solid	DI Leach	
890-1557-5	FS05	Soluble	Solid	DI Leach	
890-1557-6	FS06	Soluble	Solid	DI Leach	
890-1557-7	FS07	Soluble	Solid	DI Leach	
MB 880-12024/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-12024/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-12024/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1556-A-6-G MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1556-A-6-H MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 12046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1557-1	FS01	Soluble	Solid	300.0	12024
890-1557-2	FS02	Soluble	Solid	300.0	12024
890-1557-3	FS03	Soluble	Solid	300.0	12024
890-1557-4	FS04	Soluble	Solid	300.0	12024
890-1557-5	FS05	Soluble	Solid	300.0	12024
890-1557-6	FS06	Soluble	Solid	300.0	12024
890-1557-7	FS07	Soluble	Solid	300.0	12024
MB 880-12024/1-A	Method Blank	Soluble	Solid	300.0	12024
LCS 880-12024/2-A	Lab Control Sample	Soluble	Solid	300.0	12024
LCSD 880-12024/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	12024
890-1556-A-6-G MS	Matrix Spike	Soluble	Solid	300.0	12024
890-1556-A-6-H MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	12024

Analysis Batch: 12195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1557-8	FS08	Soluble	Solid	300.0	11932
890-1557-9	FS09	Soluble	Solid	300.0	11932
MB 880-11932/1-A	Method Blank	Soluble	Solid	300.0	11932
LCS 880-11932/2-A	Lab Control Sample	Soluble	Solid	300.0	11932
LCSD 880-11932/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11932
880-8274-A-2-C MS	Matrix Spike	Soluble	Solid	300.0	11932
880-8274-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	11932

Leach Batch: 12295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1557-10	FS10	Soluble	Solid	DI Leach	
MB 880-12295/1-A	Method Blank	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1557-1
Project/Site: PLU 78 SDG: 31403236.020.0129

HPLC/IC (Continued)

Leach Batch: 12295 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-12295/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-12295/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1571-A-5-H MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1571-A-5-I MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 12337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1557-10	FS10	Soluble	Solid	300.0	12295
MB 880-12295/1-A	Method Blank	Soluble	Solid	300.0	12295
LCS 880-12295/2-A	Lab Control Sample	Soluble	Solid	300.0	12295
LCSD 880-12295/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	12295
890-1571-A-5-H MS	Matrix Spike	Soluble	Solid	300.0	12295
890-1571-A-5-I MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	12295

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

Client Sample ID: FS01
Date Collected: 11/10/21 08:51
Date Received: 11/10/21 11:23

Lab Sample ID: 890-1557-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11984	11/11/21 07:52	KL	XEN MID
Total/NA	Analysis	8021B		1	11985	11/11/21 13:33	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	12040	11/11/21 14:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	12045	11/11/21 15:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11991	11/11/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11994	11/11/21 11:51	AJ	XEN MID
Soluble	Leach	DI Leach			12024	11/11/21 13:00	CH	XEN MID
Soluble	Analysis	300.0		1	12046	11/11/21 18:11	SC	XEN MID

Client Sample ID: FS02
Date Collected: 11/10/21 08:52
Date Received: 11/10/21 11:23

Lab Sample ID: 890-1557-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11984	11/11/21 07:52	KL	XEN MID
Total/NA	Analysis	8021B		1	11985	11/11/21 14:01	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	12040	11/11/21 14:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	12045	11/11/21 15:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11991	11/11/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11994	11/11/21 12:55	AJ	XEN MID
Soluble	Leach	DI Leach			12024	11/11/21 13:00	CH	XEN MID
Soluble	Analysis	300.0		1	12046	11/11/21 18:33	SC	XEN MID

Client Sample ID: FS03
Date Collected: 11/10/21 08:53
Date Received: 11/10/21 11:23

Lab Sample ID: 890-1557-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11984	11/11/21 07:52	KL	XEN MID
Total/NA	Analysis	8021B		1	11985	11/11/21 14:28	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	12040	11/11/21 14:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	12045	11/11/21 15:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11991	11/11/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11994	11/11/21 13:16	AJ	XEN MID
Soluble	Leach	DI Leach			12024	11/11/21 13:00	CH	XEN MID
Soluble	Analysis	300.0		20	12046	11/11/21 18:40	SC	XEN MID

Client Sample ID: FS04
Date Collected: 11/10/21 08:55
Date Received: 11/10/21 11:23

Lab Sample ID: 890-1557-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11984	11/11/21 07:52	KL	XEN MID
Total/NA	Analysis	8021B		1	11985	11/11/21 14:56	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	12040	11/11/21 14:14	AJ	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

Client Sample ID: FS04
Date Collected: 11/10/21 08:55
Date Received: 11/10/21 11:23

Lab Sample ID: 890-1557-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	12045	11/11/21 15:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11991	11/11/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11994	11/11/21 13:38	AJ	XEN MID
Soluble	Leach	DI Leach			12024	11/11/21 13:00	CH	XEN MID
Soluble	Analysis	300.0		10	12046	11/11/21 18:48	SC	XEN MID

Client Sample ID: FS05
Date Collected: 11/10/21 08:56
Date Received: 11/10/21 11:23

Lab Sample ID: 890-1557-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11984	11/11/21 07:52	KL	XEN MID
Total/NA	Analysis	8021B		1	11985	11/11/21 15:23	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	12040	11/11/21 14:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	12045	11/11/21 15:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11991	11/11/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11994	11/11/21 13:59	AJ	XEN MID
Soluble	Leach	DI Leach			12024	11/11/21 13:00	CH	XEN MID
Soluble	Analysis	300.0		1	12046	11/11/21 18:55	SC	XEN MID

Client Sample ID: FS06
Date Collected: 11/10/21 08:57
Date Received: 11/10/21 11:23

Lab Sample ID: 890-1557-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11984	11/11/21 07:52	KL	XEN MID
Total/NA	Analysis	8021B		1	11985	11/11/21 15:50	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	12040	11/11/21 14:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	12045	11/11/21 15:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11991	11/11/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11994	11/11/21 14:21	AJ	XEN MID
Soluble	Leach	DI Leach			12024	11/11/21 13:00	CH	XEN MID
Soluble	Analysis	300.0		1	12046	11/11/21 19:03	SC	XEN MID

Client Sample ID: FS07
Date Collected: 11/10/21 08:58
Date Received: 11/10/21 11:23

Lab Sample ID: 890-1557-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11984	11/11/21 07:52	KL	XEN MID
Total/NA	Analysis	8021B		1	11985	11/11/21 16:17	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	12040	11/11/21 14:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	12045	11/11/21 15:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11991	11/11/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11994	11/11/21 14:42	AJ	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

Client Sample ID: FS07

Lab Sample ID: 890-1557-7
Matrix: Solid
Date Collected: 11/10/21 08:58
Date Received: 11/10/21 11:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			12024	11/11/21 13:00	CH	XEN MID
Soluble	Analysis	300.0		1	12046	11/11/21 19:10	SC	XEN MID

Client Sample ID: FS08

Lab Sample ID: 890-1557-8
Matrix: Solid
Date Collected: 11/10/21 08:59
Date Received: 11/10/21 11:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11984	11/11/21 07:52	KL	XEN MID
Total/NA	Analysis	8021B		1	11985	11/11/21 16:56	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	12040	11/11/21 14:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	12045	11/11/21 15:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11991	11/11/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11994	11/11/21 15:04	AJ	XEN MID
Soluble	Leach	DI Leach			11932	11/12/21 10:53	SC	XEN MID
Soluble	Analysis	300.0		10	12195	11/15/21 12:59	CH	XEN MID

Client Sample ID: FS09

Lab Sample ID: 890-1557-9
Matrix: Solid
Date Collected: 11/10/21 09:00
Date Received: 11/10/21 11:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11984	11/11/21 07:52	KL	XEN MID
Total/NA	Analysis	8021B		1	11985	11/11/21 17:21	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	12040	11/11/21 14:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	12045	11/11/21 15:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11991	11/11/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11994	11/11/21 15:25	AJ	XEN MID
Soluble	Leach	DI Leach			11932	11/12/21 10:53	SC	XEN MID
Soluble	Analysis	300.0		20	12195	11/15/21 13:04	CH	XEN MID

Client Sample ID: FS10

Lab Sample ID: 890-1557-10
Matrix: Solid
Date Collected: 11/10/21 09:01
Date Received: 11/10/21 11:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11984	11/11/21 07:52	KL	XEN MID
Total/NA	Analysis	8021B		1	11985	11/11/21 17:48	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	12040	11/11/21 14:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	12045	11/11/21 15:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11991	11/11/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11994	11/11/21 15:46	AJ	XEN MID
Soluble	Leach	DI Leach			12295	11/15/21 11:50	CH	XEN MID
Soluble	Analysis	300.0		50	12337	11/15/21 20:22	SC	XEN MID

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-1557-1
Project/Site: PLU 78 SDG: 31403236.020.0129

Laboratory: Eurofins Xenco, 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: 890-1557-1
Project/Site: PLU 78 SDG: 31403236.020.0129

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 Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: WSP USA Inc.
Project/Site: PLU 78

Job ID: 890-1557-1
SDG: 31403236.020.0129

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1557-1	FS01	Solid	11/10/21 08:51	11/10/21 11:23	4
890-1557-2	FS02	Solid	11/10/21 08:52	11/10/21 11:23	4
890-1557-3	FS03	Solid	11/10/21 08:53	11/10/21 11:23	4
890-1557-4	FS04	Solid	11/10/21 08:55	11/10/21 11:23	4
890-1557-5	FS05	Solid	11/10/21 08:56	11/10/21 11:23	4
890-1557-6	FS06	Solid	11/10/21 08:57	11/10/21 11:23	4
890-1557-7	FS07	Solid	11/10/21 08:58	11/10/21 11:23	4
890-1557-8	FS08	Solid	11/10/21 08:59	11/10/21 11:23	4
890-1557-9	FS09	Solid	11/10/21 09:00	11/10/21 11:23	4
890-1557-10	FS10	Solid	11/10/21 09:01	11/10/21 11:23	4

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:	Tacoma Morrissey	Bill to: (if different)	Adrian Baker
Company Name:	WSP USA Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A St. Bldg 1, Unit 222	Address:	3104 E Greene St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	(432) 704-5178	Email:	travis.casey@wsp.com, kalei.jennings@wsp.com, dan.moir@w

Work Order Comments

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

Project Name:	PLU 78	Turn Around	
Project Number:	31403236.020.0129	Routine	
P.O. Number:		Rush: 24hr	
Sampler's Name:	Travis Casey	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	9.8/9.6	Thermometer ID	
Received Intact:	(Yes) No		TM-007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	CP

Work Order Notes

IN:NAPP2126639352
CC:1080781001
API:30-015-27536

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

890-1557 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
FS01	S	11/10/2021	0851	4	1	x	x	x	Composite
FS02	S	11/10/2021	0852	4	1	x	x	x	Composite
FS03		11/10/2021	0853	4	1	x	x	x	Composite
FS04		11/10/2021	0855	4	1	x	x	x	Composite
FS05		11/10/2021	0856	4	1	x	x	x	Composite
FS06		11/10/2021	0857	4	1	x	x	x	Composite
FS07		11/10/2021	0858	4	1	x	x	x	Composite
FS08		11/10/2021	0859	4	1	x	x	x	Composite
FS09		11/10/2021	0900	4	1	x	x	x	Composite
FS10		11/10/2021	0901	4	1	x	x	x	Composite

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		11.10.21 1123	2		
3			4		
5			6		

Revised Date 051418 Rev 2018 1

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-502 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset com	State of Origin: New Mexico	Page: Page 1 of 2
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-1557-1
Address: 1211 W Florida Ave	Due Date Requested: 11/11/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: PLU 78	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
FS01 (890-1557-1)	11/10/21	08 51 Mountain		Solid			X	X	X	X	X	1	
FS02 (890-1557-2)	11/10/21	08 52 Mountain		Solid			X	X	X	X	X	1	
FS03 (890-1557-3)	11/10/21	08 53 Mountain		Solid			X	X	X	X	X	1	
FS04 (890-1557-4)	11/10/21	08 55 Mountain		Solid			X	X	X	X	X	1	
FS05 (890-1557-5)	11/10/21	08 56 Mountain		Solid			X	X	X	X	X	1	
FS06 (890-1557-6)	11/10/21	08 57 Mountain		Solid			X	X	X	X	X	1	
FS07 (890-1557-7)	11/10/21	08 58 Mountain		Solid			X	X	X	X	X	1	
FS08 (890-1557-8)	11/10/21	08 59 Mountain		Solid			X	X	X	X	X	1	
FS09 (890-1557-9)	11/10/21	09 00 Mountain		Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

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

Empty Kit Relinquished by	Date	Time	Method of Shipment.

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Cloe Gf 11.10.21			Leticia R	11/11/21 11 25	
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time.	Company	Received by	Date/Time	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 3.2/3.3

Ver: 06/08/2021

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-502 2
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset com	State of Origin: New Mexico	Page: Page 2 of 2
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-1557-1
Address: 1211 W Florida Ave	Due Date Requested: 11/11/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: PLU 78	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8016MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note
			Preservation Code:										
FS10 (890-1557-10)	11/10/21	09 01 Mountain		Solid			X	X	X	X	X		

Note: Since laboratory accreditations are subject to change Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by: Alice Cruz 11.10.21	Date/Time	Company	Received by: Leticia R	Date/Time: 11/11/21 11 25	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 3.2/3.3

Ver 06/08/2021

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1557-1
SDG Number: 31403236.020.0129

Login Number: 1557
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, 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: 890-1557-1
SDG Number: 31403236.020.0129

Login Number: 1557
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland
List Creation: 11/11/21 11:49 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-3189-1
Laboratory Sample Delivery Group: 03E1558044
Client Project/Site: PLU 78B

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
10/17/2022 10:23:11 AM

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

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

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

Client: Ensolum
Project/Site: PLU 78B

Laboratory Job ID: 890-3189-1
SDG: 03E1558044

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3189-1
SDG: 03E1558044

Qualifiers

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3189-1
SDG: 03E1558044

Job ID: 890-3189-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3189-1

Receipt
The samples were received on 10/10/2022 2:48 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS09A (890-3189-1), FS10A (890-3189-2) and FS12A (890-3189-3).

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3189-1
SDG: 03E1558044

Client Sample ID: FS09A
Lab Sample ID: 890-3189-1

Date Collected: 10/10/22 11:20
Matrix: Solid
Date Received: 10/10/22 14:48
Sample Depth: 4'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1040		5.05		mg/Kg			10/14/22 14:51	1

Client Sample ID: FS10A
Lab Sample ID: 890-3189-2

Date Collected: 10/10/22 12:55
Matrix: Solid
Date Received: 10/10/22 14:48
Sample Depth: 4.5'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6280		50.1		mg/Kg			10/14/22 14:55	10

Client Sample ID: FS12A
Lab Sample ID: 890-3189-3

Date Collected: 10/10/22 11:30
Matrix: Solid
Date Received: 10/10/22 14:48
Sample Depth: 4'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	123		4.99		mg/Kg			10/13/22 19:39	1

QC Sample Results

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3189-1
SDG: 03E1558044

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-36661/1-A
Matrix: Solid
Analysis Batch: 36885

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			10/13/22 15:47	1

Lab Sample ID: LCS 880-36661/2-A
Matrix: Solid
Analysis Batch: 36885

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	267.3		mg/Kg		107	90 - 110		

Lab Sample ID: LCSD 880-36661/3-A
Matrix: Solid
Analysis Batch: 36885

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	254.7		mg/Kg		102	90 - 110	5	20

Lab Sample ID: 880-20136-A-1-D MS
Matrix: Solid
Analysis Batch: 36885

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	19.4		248	269.1		mg/Kg		101	90 - 110		

Lab Sample ID: 880-20136-A-1-E MSD
Matrix: Solid
Analysis Batch: 36885

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	19.4		248	267.2		mg/Kg		100	90 - 110	1	20

Lab Sample ID: MB 880-36771/1-A
Matrix: Solid
Analysis Batch: 36929

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			10/14/22 12:24	1

Lab Sample ID: LCS 880-36771/2-A
Matrix: Solid
Analysis Batch: 36929

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	268.5		mg/Kg		107	90 - 110		

Lab Sample ID: LCSD 880-36771/3-A
Matrix: Solid
Analysis Batch: 36929

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	268.7		mg/Kg		107	90 - 110	0	20

QC Sample Results

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3189-1
SDG: 03E1558044

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-3191-A-11-C MS
Matrix: Solid
Analysis Batch: 36929

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	76.4		250	341.4		mg/Kg		106	90 - 110

Lab Sample ID: 890-3191-A-11-D MSD
Matrix: Solid
Analysis Batch: 36929

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	76.4		250	342.4		mg/Kg		106	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3189-1
SDG: 03E1558044

HPLC/IC

Leach Batch: 36661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3189-3	FS12A	Soluble	Solid	DI Leach	
MB 880-36661/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-36661/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-36661/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-20136-A-1-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-20136-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 36771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3189-1	FS09A	Soluble	Solid	DI Leach	
890-3189-2	FS10A	Soluble	Solid	DI Leach	
MB 880-36771/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-36771/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-36771/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3191-A-11-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3191-A-11-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 36885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3189-3	FS12A	Soluble	Solid	300.0	36661
MB 880-36661/1-A	Method Blank	Soluble	Solid	300.0	36661
LCS 880-36661/2-A	Lab Control Sample	Soluble	Solid	300.0	36661
LCSD 880-36661/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	36661
880-20136-A-1-D MS	Matrix Spike	Soluble	Solid	300.0	36661
880-20136-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	36661

Analysis Batch: 36929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3189-1	FS09A	Soluble	Solid	300.0	36771
890-3189-2	FS10A	Soluble	Solid	300.0	36771
MB 880-36771/1-A	Method Blank	Soluble	Solid	300.0	36771
LCS 880-36771/2-A	Lab Control Sample	Soluble	Solid	300.0	36771
LCSD 880-36771/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	36771
890-3191-A-11-C MS	Matrix Spike	Soluble	Solid	300.0	36771
890-3191-A-11-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	36771

Lab Chronicle

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3189-1
SDG: 03E1558044

Client Sample ID: FS09A
Date Collected: 10/10/22 11:20
Date Received: 10/10/22 14:48

Lab Sample ID: 890-3189-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.95 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		1			36929	10/14/22 14:51	CH	EET MID

Client Sample ID: FS10A
Date Collected: 10/10/22 12:55
Date Received: 10/10/22 14:48

Lab Sample ID: 890-3189-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.99 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		10			36929	10/14/22 14:55	CH	EET MID

Client Sample ID: FS12A
Date Collected: 10/10/22 11:30
Date Received: 10/10/22 14:48

Lab Sample ID: 890-3189-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	36661	10/11/22 10:10	KS	EET MID
Soluble	Analysis	300.0		1			36885	10/13/22 19:39	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3189-1
SDG: 03E1558044

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

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

Method Summary

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3189-1
SDG: 03E1558044

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

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

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3189-1
SDG: 03E1558044

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3189-1	FS09A	Solid	10/10/22 11:20	10/10/22 14:48	4'
890-3189-2	FS10A	Solid	10/10/22 12:55	10/10/22 14:48	4.5'
890-3189-3	FS12A	Solid	10/10/22 11:30	10/10/22 14:48	4'

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Chain of Custody

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

Work Order No: _____

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

Work Order Comments

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

Project Name:	PLU 78B	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558044	Due Date:	
Project Location:	32.19442, -103.82867	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Meredith Roberts		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM-007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.6
Total Containers:		Corrected Temperature:	4.4

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Chlorides
FS09A	S	10/10/22	1120	4'	C	1	X
FS10A	S		1255	4.5'	C	1	X
FS12A	S	↓	1130	4'	C	1	X

MR

890-3189 Chain of Custody

Preservative Codes

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

Sample Comments

Incident #: NAPP2126639352

Cost Center: 1080781001

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Amanda Stein	10/10/22 1448	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3189-1
SDG Number: 03E1558044

Login Number: 3189
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3189-1
SDG Number: 03E1558044

Login Number: 3189
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 10/12/22 11:01 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-3190-1
Laboratory Sample Delivery Group: 03E1558044
Client Project/Site: PLU 78B

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
10/17/2022 11:37:48 AM

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

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

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

Client: Ensolum
Project/Site: PLU 78B

Laboratory Job ID: 890-3190-1
SDG: 03E1558044

Table of Contents

Eurofins Carlsbad
10/17/2022

Definitions/Glossary

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3190-1
SDG: 03E1558044

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3190-1
SDG: 03E1558044

Job ID: 890-3190-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3190-1

Receipt
The samples were received on 10/10/2022 2:48 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: PH01 (890-3190-1), PH01A (890-3190-2) and PH01B (890-3190-3).

GC VOA
Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-36976 and analytical batch 880-37017 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-20395-A-1-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH01 (890-3190-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH01B (890-3190-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-36976 and analytical batch 880-37017 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (880-20138-A-4-E MS) and (880-20138-A-4-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3190-1
SDG: 03E1558044

Client Sample ID: PH01

Date Collected: 10/10/22 12:10
Date Received: 10/10/22 14:48
Sample Depth: 0.5'

Lab Sample ID: 890-3190-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:04	10/16/22 01:34	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:04	10/16/22 01:34	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:04	10/16/22 01:34	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/14/22 14:04	10/16/22 01:34	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:04	10/16/22 01:34	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/14/22 14:04	10/16/22 01:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*44*	*S1-*	*70 - 130*	*10/14/22 14:04*	*10/16/22 01:34*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*10/14/22 14:04*	*10/16/22 01:34*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/17/22 12:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/13/22 09:37	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/12/22 08:44	10/12/22 19:32	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/12/22 08:44	10/12/22 19:32	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/12/22 08:44	10/12/22 19:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*10/12/22 08:44*	*10/12/22 19:32*	*1*
o-Terphenyl	*90*		*70 - 130*	*10/12/22 08:44*	*10/12/22 19:32*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**15.2**		5.05		mg/Kg			10/13/22 19:46	1

Client Sample ID: PH01A

Date Collected: 10/10/22 12:15
Date Received: 10/10/22 14:48
Sample Depth: 2'

Lab Sample ID: 890-3190-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:04	10/16/22 01:54	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:04	10/16/22 01:54	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:04	10/16/22 01:54	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/14/22 14:04	10/16/22 01:54	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:04	10/16/22 01:54	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/14/22 14:04	10/16/22 01:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*10/14/22 14:04*	*10/16/22 01:54*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3190-1
SDG: 03E1558044

Client Sample ID: PH01A

Lab Sample ID: 890-3190-2
Matrix: Solid
Date Collected: 10/10/22 12:15
Date Received: 10/10/22 14:48
Sample Depth: 2'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*10/14/22 14:04*	*10/16/22 01:54*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/17/22 12:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/13/22 09:37	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/12/22 08:44	10/12/22 19:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/12/22 08:44	10/12/22 19:53	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/12/22 08:44	10/12/22 19:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*94*		*70 - 130*	*10/12/22 08:44*	*10/12/22 19:53*	*1*
o-Terphenyl	*95*		*70 - 130*	*10/12/22 08:44*	*10/12/22 19:53*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**24.6**		5.02	mg/Kg			10/14/22 08:28	1

Client Sample ID: PH01B

Lab Sample ID: 890-3190-3
Matrix: Solid
Date Collected: 10/10/22 12:20
Date Received: 10/10/22 14:48
Sample Depth: 4'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		10/14/22 14:04	10/16/22 02:15	1
Toluene	<0.00201	U	0.00201	mg/Kg		10/14/22 14:04	10/16/22 02:15	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		10/14/22 14:04	10/16/22 02:15	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		10/14/22 14:04	10/16/22 02:15	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		10/14/22 14:04	10/16/22 02:15	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		10/14/22 14:04	10/16/22 02:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*10/14/22 14:04*	*10/16/22 02:15*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*10/14/22 14:04*	*10/16/22 02:15*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			10/17/22 12:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/13/22 09:37	1

Client Sample Results

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3190-1
SDG: 03E1558044

Client Sample ID: PH01B

Date Collected: 10/10/22 12:20
Date Received: 10/10/22 14:48
Sample Depth: 4'

Lab Sample ID: 890-3190-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/12/22 08:44	10/12/22 20:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/12/22 08:44	10/12/22 20:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/12/22 08:44	10/12/22 20:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*10/12/22 08:44*	*10/12/22 20:13*	*1*
o-Terphenyl	*101*		*70 - 130*	*10/12/22 08:44*	*10/12/22 20:13*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**30.1**		4.95		mg/Kg			10/14/22 08:36	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3190-1
SDG: 03E1558044

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-20395-A-1-B MS	Matrix Spike	93	97
880-20395-A-1-C MSD	Matrix Spike Duplicate	114	88
890-3190-1	PH01	44 S1-	70
890-3190-2	PH01A	127	93
890-3190-3	PH01B	131 S1+	104
LCS 880-36976/1-A	Lab Control Sample	86	93
LCSD 880-36976/2-A	Lab Control Sample Dup	84	94
MB 880-36976/5-A	Method Blank	96	88

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-20138-A-4-E MS	Matrix Spike	74	67 S1-
880-20138-A-4-F MSD	Matrix Spike Duplicate	75	66 S1-
890-3190-1	PH01	93	90
890-3190-2	PH01A	94	95
890-3190-3	PH01B	98	101
LCS 880-36718/2-A	Lab Control Sample	99	107
LCSD 880-36718/3-A	Lab Control Sample Dup	88	94
MB 880-36718/1-A	Method Blank	83	92

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3190-1
SDG: 03E1558044

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-36976/5-A
Matrix: Solid
Analysis Batch: 37017

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36976

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:04	10/15/22 19:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:04	10/15/22 19:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:04	10/15/22 19:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/14/22 14:04	10/15/22 19:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:04	10/15/22 19:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/14/22 14:04	10/15/22 19:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*10/14/22 14:04*	*10/15/22 19:40*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*10/14/22 14:04*	*10/15/22 19:40*	*1*

Lab Sample ID: LCS 880-36976/1-A
Matrix: Solid
Analysis Batch: 37017

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 36976

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1035		mg/Kg		103	70 - 130		
Toluene			0.100	0.09984		mg/Kg		100	70 - 130		
Ethylbenzene			0.100	0.08928		mg/Kg		89	70 - 130		
m-Xylene & p-Xylene			0.200	0.1795		mg/Kg		90	70 - 130		
o-Xylene			0.100	0.09130		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: LCSD 880-36976/2-A
Matrix: Solid
Analysis Batch: 37017

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 36976

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1082		mg/Kg		108	70 - 130	4	35
Toluene			0.100	0.1038		mg/Kg		104	70 - 130	4	35
Ethylbenzene			0.100	0.09363		mg/Kg		94	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1920		mg/Kg		96	70 - 130	7	35
o-Xylene			0.100	0.09683		mg/Kg		97	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 880-20395-A-1-B MS
Matrix: Solid
Analysis Batch: 37017

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 36976

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U F2 F1	0.100	0.08441		mg/Kg		84	70 - 130		
Toluene	<0.00202	U F2 F1	0.100	0.07227		mg/Kg		72	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3190-1
SDG: 03E1558044

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

Lab Sample ID: 880-20395-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 37017 — **Prep Batch: 36976**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U F1	0.100	0.05766	F1	mg/Kg		57	70 - 130
m-Xylene & p-Xylene	<0.00403	U F1	0.201	0.1558		mg/Kg		78	70 - 130
o-Xylene	<0.00202	U F1	0.100	0.07839		mg/Kg		78	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 880-20395-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 37017 — **Prep Batch: 36976**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U F2 F1	0.0990	0.03276	F2 F1	mg/Kg		33	70 - 130	88	35
Toluene	<0.00202	U F2 F1	0.0990	0.03934	F2 F1	mg/Kg		40	70 - 130	59	35
Ethylbenzene	<0.00202	U F1	0.0990	0.04508	F1	mg/Kg		46	70 - 130	24	35
m-Xylene & p-Xylene	<0.00403	U F1	0.198	0.1249	F1	mg/Kg		63	70 - 130	22	35
o-Xylene	<0.00202	U F1	0.0990	0.06460	F1	mg/Kg		65	70 - 130	19	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*

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

Lab Sample ID: MB 880-36718/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 36713 — **Prep Batch: 36718**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/12/22 08:44	10/12/22 11:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/12/22 08:44	10/12/22 11:04	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/12/22 08:44	10/12/22 11:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*10/12/22 08:44*	*10/12/22 11:04*	*1*
o-Terphenyl	*92*		*70 - 130*	*10/12/22 08:44*	*10/12/22 11:04*	*1*

Lab Sample ID: LCS 880-36718/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 36713 — **Prep Batch: 36718**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1007		mg/Kg		101	70 - 130
Diesel Range Organics (Over C10-C28)	1000	903.1		mg/Kg		90	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3190-1
SDG: 03E1558044

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

Lab Sample ID: LCS 880-36718/2-A
Matrix: Solid
Analysis Batch: 36713

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 36718

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	107		70 - 130

Lab Sample ID: LCSD 880-36718/3-A
Matrix: Solid
Analysis Batch: 36713

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 36718

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	824.6		mg/Kg		82	70 - 130	20	20
Diesel Range Organics (Over C10-C28)			1000	942.9		mg/Kg		94	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	94		70 - 130

Lab Sample ID: 880-20138-A-4-E MS
Matrix: Solid
Analysis Batch: 36713

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 36718

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	998	1005		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U	998	700.9		mg/Kg		70	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	74		70 - 130
o-Terphenyl	67	S1-	70 - 130

Lab Sample ID: 880-20138-A-4-F MSD
Matrix: Solid
Analysis Batch: 36713

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 36718

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	998	1021		mg/Kg		101	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.8	U	998	713.6		mg/Kg		72	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	75		70 - 130
o-Terphenyl	66	S1-	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3190-1
SDG: 03E1558044

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-36661/1-A
Matrix: Solid
Analysis Batch: 36885

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			10/13/22 15:47	1

Lab Sample ID: LCS 880-36661/2-A
Matrix: Solid
Analysis Batch: 36885

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	267.3		mg/Kg		107	90 - 110		

Lab Sample ID: LCSD 880-36661/3-A
Matrix: Solid
Analysis Batch: 36885

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	254.7		mg/Kg		102	90 - 110	5	20

Lab Sample ID: 880-20136-A-1-D MS
Matrix: Solid
Analysis Batch: 36885

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	19.4		248	269.1		mg/Kg		101	90 - 110		

Lab Sample ID: 880-20136-A-1-E MSD
Matrix: Solid
Analysis Batch: 36885

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	19.4		248	267.2		mg/Kg		100	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3190-1
SDG: 03E1558044

GC VOA

Prep Batch: 36976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3190-1	PH01	Total/NA	Solid	5035	
890-3190-2	PH01A	Total/NA	Solid	5035	
890-3190-3	PH01B	Total/NA	Solid	5035	
MB 880-36976/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-36976/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-36976/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-20395-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-20395-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 37017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3190-1	PH01	Total/NA	Solid	8021B	36976
890-3190-2	PH01A	Total/NA	Solid	8021B	36976
890-3190-3	PH01B	Total/NA	Solid	8021B	36976
MB 880-36976/5-A	Method Blank	Total/NA	Solid	8021B	36976
LCS 880-36976/1-A	Lab Control Sample	Total/NA	Solid	8021B	36976
LCSD 880-36976/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	36976
880-20395-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	36976
880-20395-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	36976

Analysis Batch: 37149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3190-1	PH01	Total/NA	Solid	Total BTEX	
890-3190-2	PH01A	Total/NA	Solid	Total BTEX	
890-3190-3	PH01B	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 36713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3190-1	PH01	Total/NA	Solid	8015B NM	36718
890-3190-2	PH01A	Total/NA	Solid	8015B NM	36718
890-3190-3	PH01B	Total/NA	Solid	8015B NM	36718
MB 880-36718/1-A	Method Blank	Total/NA	Solid	8015B NM	36718
LCS 880-36718/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	36718
LCSD 880-36718/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	36718
880-20138-A-4-E MS	Matrix Spike	Total/NA	Solid	8015B NM	36718
880-20138-A-4-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	36718

Prep Batch: 36718

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3190-1	PH01	Total/NA	Solid	8015NM Prep	
890-3190-2	PH01A	Total/NA	Solid	8015NM Prep	
890-3190-3	PH01B	Total/NA	Solid	8015NM Prep	
MB 880-36718/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-36718/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-36718/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-20138-A-4-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-20138-A-4-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3190-1
SDG: 03E1558044

GC Semi VOA

Analysis Batch: 36829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3190-1	PH01	Total/NA	Solid	8015 NM	
890-3190-2	PH01A	Total/NA	Solid	8015 NM	
890-3190-3	PH01B	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 36661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3190-1	PH01	Soluble	Solid	DI Leach	
890-3190-2	PH01A	Soluble	Solid	DI Leach	
890-3190-3	PH01B	Soluble	Solid	DI Leach	
MB 880-36661/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-36661/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-36661/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-20136-A-1-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-20136-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 36885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3190-1	PH01	Soluble	Solid	300.0	36661
890-3190-2	PH01A	Soluble	Solid	300.0	36661
890-3190-3	PH01B	Soluble	Solid	300.0	36661
MB 880-36661/1-A	Method Blank	Soluble	Solid	300.0	36661
LCS 880-36661/2-A	Lab Control Sample	Soluble	Solid	300.0	36661
LCSD 880-36661/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	36661
880-20136-A-1-D MS	Matrix Spike	Soluble	Solid	300.0	36661
880-20136-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	36661

Lab Chronicle

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3190-1
SDG: 03E1558044

Client Sample ID: PH01

Date Collected: 10/10/22 12:10
Date Received: 10/10/22 14:48

Lab Sample ID: 890-3190-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	36976	10/14/22 14:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	37017	10/16/22 01:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37149	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36829	10/13/22 09:37	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	36718	10/12/22 08:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36713	10/12/22 19:32	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	36661	10/11/22 10:10	KS	EET MID
Soluble	Analysis	300.0		1			36885	10/13/22 19:46	CH	EET MID

Client Sample ID: PH01A

Date Collected: 10/10/22 12:15
Date Received: 10/10/22 14:48

Lab Sample ID: 890-3190-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	36976	10/14/22 14:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	37017	10/16/22 01:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37149	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36829	10/13/22 09:37	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	36718	10/12/22 08:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36713	10/12/22 19:53	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	36661	10/11/22 10:10	KS	EET MID
Soluble	Analysis	300.0		1			36885	10/14/22 08:28	CH	EET MID

Client Sample ID: PH01B

Date Collected: 10/10/22 12:20
Date Received: 10/10/22 14:48

Lab Sample ID: 890-3190-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	36976	10/14/22 14:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	37017	10/16/22 02:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37149	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36829	10/13/22 09:37	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	36718	10/12/22 08:44	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36713	10/12/22 20:13	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	36661	10/11/22 10:10	KS	EET MID
Soluble	Analysis	300.0		1			36885	10/14/22 08:36	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3190-1
SDG: 03E1558044

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3190-1
SDG: 03E1558044

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: PLU 78B

Job ID: 890-3190-1
SDG: 03E1558044

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3190-1	PH01	Solid	10/10/22 12:10	10/10/22 14:48	0.5'
890-3190-2	PH01A	Solid	10/10/22 12:15	10/10/22 14:48	2'
890-3190-3	PH01B	Solid	10/10/22 12:20	10/10/22 14:48	4'

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

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

Work Order Comments

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

Project Name:	PLU 78B	Turn Around	☑ Routine ☐ Rush
Project Number:	03E1558044	Due Date:	
Project Location:	32.19442, -103.828157	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Meredith Roberts		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM-007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.3
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.6
Total Containers:		Corrected Temperature:	4.4

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chlorides	BTEX	TPH	Sample Comments
PH01	S	10/10/22	1210	0.5'	G	1		X	X	X	Incident #:
PH01A	S	↓	1215	2'	G	1		X	X	X	NAPP2126639352
PH01B	S	↓	1220	4'	G	1		X	X	X	
											Cost Center:
											1080781001

890-3190 Chain of Custody

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Amanda Stutz	10/10/22 1448	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3190-1
SDG Number: 03E1558044

Login Number: 3190
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3190-1
SDG Number: 03E1558044

Login Number: 3190
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 10/12/22 11:01 AM

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

ENSOLUM

APPENDIX D

NMOCD Notifications

From: Hamlet, Robert, EMNRD
To: melanie.collins@exxonmobil.com
Cc: Enviro, OCD, EMNRD; DelawareSpills@exxonmobil.com; Cole, Aimee; Ager, Ashley; Morrissey, Tacoma; Bratcher, Mike, EMNRD; Hensley, Chad, EMNRD; Velez, Nelson, EMNRD
Subject: (Extension Approval) XTO - PLU 78 B Salt Water Disposal / NAPP2126639352
Date: Friday, December 3, 2021 2:31:00 PM
Attachments: image003.png

RE: Incident #**NAPP2126639352**

Melanie,

Your request for an extension to **March 8th, 2022** is approved.

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

From: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Sent: Friday, December 3, 2021 1:36 PM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Subject: FW: [EXTERNAL] XTO Extension Request - PLU 78 B Salt Water Disposal / NAPP2126639352

From: Collins, Melanie <melanie.collins@exxonmobil.com>
Sent: Friday, December 3, 2021 8:41 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>; Cole, Aimee <Aimee.Cole@wsp.com>; Ager, Ashley <Ashley.Ager@wsp.com>; Morrissey, Tacoma <Tacoma.Morrissey@wsp.com>
Subject: [EXTERNAL] XTO Extension Request - PLU 78 B Salt Water Disposal / NAPP2126639352

All,

XTO is requesting an extension for the current 90-day deadline for submitting a remediation work

plan or closure report required in 19.15.29.12.B.(1) NMAC at the PLU 78 B Salt Water Disposal (Incident Number NAPP2126639352). The release was discovered on September 9, 2021 and initial site assessment was conducted. Remediation activities have been ongoing since October 19, 2021 and to date an estimated 540 cubic yards of impacted soil have been removed. The most recent laboratory analytical results indicate further remediation work is warranted. At this time, XTO and WSP are discussing remedial options to address remaining impacts in an effort to ensure protection of public health and the environment, while remaining compliant with XTO's safety guidelines. In order complete the remediation work, and submit a remediation work plan or closure report XTO requests a 90-day extension of this deadline until March 8, 2022.

Thank you,

Melanie Collins
SSHE Technician
XTO ENERGY
An **ExxonMobil** Subsidiary
6401 Holiday Hill Rd, Bldg 5
Midland, TX 79707
432-218-3709

From: Morrissey, Tacoma
To: OCD.Enviro@state.nm.us
Cc: DelawareSpills /SM; WSP-XTO-Project-Team
Subject: XTO Site Activities for the Week of Nov 29
Date: Wednesday, November 24, 2021 3:32:27 PM
Attachments: image001.png

All,

XTO will be completing excavation and sampling activities at the following sites next week. We anticipate collecting final confirmation samples.

Tuesday:

- PLU 78 B / NAPP2126639352

Wednesday:

- *PLU 30 107H / nAPP2126639352

Thursday:

- Ross Ranch 6 (nAPP2034638293)

Friday:

- Ross Ranch 6 (nAPP2034638293)

Thank you and have a Happy Thanksgiving,

Tacoma Morrissey
Consultant Geologist
Office Manager, Midland
M+ 1 337-257-8307
WSP USA
3300 North A Street
Bldg 1, Unit 222
Midland, Texas 79705

wsp.com

-LAEmHhHzdJzBlTWfa4Hgs7pbKl

From: Morrissey, Tacoma
To: OCD.Enviro@state.nm.us
Cc: DelawareSpills /SM; WSP-XTO-Project-Team
Subject: XTO Site Activities for the Week of October 11
Date: Friday, October 8, 2021 4:34:18 PM
Attachments: image001.png

All,

XTO will be completing excavation and sampling activities at the following sites next week. We anticipate collecting final confirmation samples.

Thursday:

- PLU 28 BS 901H / nAPP2116739947
- PLU 78 B / NAPP2126639352

Friday:

- PLU 28 BS 901H / nAPP2116739947
- PLU 78 B / NAPP2126639352

Thank you,

Tacoma Morrissey
Consultant Geologist
Office Manager, Midland

M+ 1 337-257-8307
WSP USA
3300 North A Street
Bldg 1, Unit 222
Midland, Texas 79705

wsp.com

-LAEmHhHzdJzBlTWfa4Hgs7pbKI

From: Morrissey, Tacoma
To: OCD.Enviro@state.nm.us
Cc: DelawareSpills /SM; WSP-XTO-Project-Team
Subject: XTO Site Activities for the Week of October 18
Date: Friday, October 15, 2021 4:43:41 PM
Attachments: image001.png

All,

XTO will be completing excavation and sampling activities at the following sites next week. We anticipate collecting final confirmation samples.

Monday:

- PLU 78 B / NAPP2126639352

Tuesday:

- Ross Ranch 6 (nAPP2034638293)

Wednesday:

- Ross Ranch 6 (nAPP2034638293)
- PLU 78 B / NAPP2126639352

Thursday:

- Ross Ranch 6 (nAPP2034638293)

Friday:

- Ross Ranch 6 (nAPP2034638293)

Thank you,

Tacoma Morrissey
Consultant Geologist
Office Manager, Midland

M+ 1 337-257-8307
WSP USA
3300 North A Street
Bldg 1, Unit 222
Midland, Texas 79705

wsp.com

-LAEmHhHzdJzBITWfa4Hgs7pbKI

From: Morrissey, Tacoma
To: OCD.Enviro@state.nm.us
Cc: DelawareSpills /SM; WSP-XTO-Project-Team
Subject: XTO Site Activities for the Week of October 25
Date: Friday, October 22, 2021 3:38:50 PM
Attachments: image001.png

All,

XTO will be completing excavation and sampling activities at the following sites next week. We anticipate collecting final confirmation samples.

Monday:

- Ross Ranch 6 / NAPP2034638293
- PLU 78 B / NAPP2126639352

Tuesday:

- Ross Ranch 6 / NAPP2034638293
- PLU 78 B / NAPP2126639352

Wednesday:

- Ross Ranch 6 / NAPP2034638293
- PLU 78 B / NAPP2126639352

Thursday:

- Ross Ranch 6 / NAPP2034638293

Friday:

- Ross Ranch 6 / NAPP2034638293

Thank you,

Tacoma Morrissey
Consultant Geologist
Office Manager, Midland
M+ 1 337-257-8307
WSP USA
3300 North A Street
Bldg 1, Unit 222
Midland, Texas 79705

wsp.com

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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 160109

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 160109
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Deferral Request Approved. The Deferral Request and C-141 will be accepted for record and marked accordingly. The release will remain open in OCD database files and reflect an open environmental issue. The OCD will not close a release, where contaminants are left in place, due to close proximity to equipment. The incident will only be closed after all contaminated soil has been remediated to meet OCD Spill Rule Standards.	12/16/2022