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	NAPP2126045826
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.20138 Longitude -103.88395
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU 293	Site Type Flow Line
Date Release Discovered 9/05/2021	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
J	21	24S	30E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 5.88	Volume Recovered (bbls) 4.40
☒ Produced Water	Volume Released (bbls) 67.57	Volume Recovered (bbls) 50.60
	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: The flowline failed due to corrosion, releasing fluids to ground. Vacuum trucks recovered all standing fluids. A third-party contractor has been retained for remediation activities.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2126045826
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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? A release equal to or greater than 25 barrels.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes, by Garrett Green to emily.hernandez@state.nm.us; Mike Bratcher; Victoria Venegas; Rob Hamlet; camorgan@blm.gov; blm_nm_cfo_spill@blm.gov on Monday, September 6, 2021 9:45 AM via email.

Initial Response

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

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

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

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

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

Printed Name: Adrian Baker Title: SSHE Coordinator

Signature: Adrian Baker Date: 9/17/21

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

OCD Only

Received by: Ramona Marcus Date: 9/20/2021

Location:	PLU 293 Flow Line	
Spill Date:	9/5/2021	
Area 1		
Approximate Area =	4397.00	sq. ft.
Average Saturation (or depth) of spill =	0.75	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	4.52	bbls
Total Produced Water =	51.95	bbls
Area 2		
Approximate Area =	1579.70	sq. ft.
Average Saturation (or depth) of spill =	3.62	inches

Average Porosity Factor =	0.20	

VOLUME OF LEAK		
Total Crude Oil =	1.36	bbls
Total Produced Water =	15.62	bbls

TOTAL VOLUME OF LEAK		
Total Crude Oil =	**5.88**	**bbls**
Total Produced Water =	**67.57**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**4.40**	**bbls**
Total Produced Water =	**50.60**	**bbls**

Incident ID	NAPP2126045826
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.

Incident ID	NAPP2126045826
District RP	
Facility ID	
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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: Adrian Baker Title: Environmental Coordinator

Signature: Adrian Baker Date: 02/02/2022

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
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. *Delineation not feasible due to existing tank battery, lines, equipment,and containment above potential affected area*

☐ 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: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Signature: Jennifer Nobui Date: 09/22/2022

Adrian Baker
XTO Energy, Inc.
6401 Holiday Hill Road, Bldg 5
Midland, TX 79707
432-236-3808
Adrian.baker@exxonmobil.com

June 16, 2022

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

Re: Delineation Work Plan
PLU 293 Flow Line
Incident Number NAPP2126045826
Case Number 22700
Eddy County, New Mexico

To Whom it May Concern:
XTO Energy Inc. (XTO), has prepared the following Delineation Work Plan (Work Plan) as a followup to the Closure Request submitted on January 28, 2022 and in response to the April 15, 2022 pre-hearing meeting with the New Mexico Oil Conservation Division (NMOCD). This Work Plan is designed to delineate the horizontal extent of the impacted soil identified in the lease road at the Poker Lake Unit (PLU) 293 Flow Line (Site). The final reclamation activities will be completed upon abandonment of the road per Title 19, Chapter 15, Part 29, Section 13 (19.15.29.13) of the New Mexico Administrative Code (NMAC).

SUMMARY

The Site is located in Unit J, Section 21, Township 24 South, Range 30 East, in Eddy County, New Mexico (32.20138° N, 103.88395° W) and is associated with oil and gas exploration and production operations on Bureau of Land Management (BLM) Federal Land. On September 5, 2021, a flow line failed due to corrosion, resulting in the release of 5.88 barrels (bbls) of crude oil and 67.57 bbls of produced water onto the well pad, lease road, and pasture area north of the pad (the "Site"). A vacuum truck was immediately dispatched to the Site to recover freestanding fluids; approximately 4.4 bbls of crude oil and 50.6 bbls of produced water were recovered. XTO reported the release to the NMOCD via email on September 6, 2021 and submitted a Release Notification Form C-141 (Form C-141) on September 17, 2021. The release was assigned Incident Number NAPP2126045826. XTO completed remediation activities in response to the release and submitted a Closure Request to the NMOCD on January 28, 2022.

The Closure Request detailed site characterization according to Table 1, Closure Criteria for Soils Impacted by a Release, of 19.15.29.12 NMAC. Based on the site characterization, the following Closure Criteria were applied to the release areas on the active well pad and lease road:

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

As part of the remediation, the pad was backfilled with locally procured caliche and the pasture was backfilled with local procured top soil. Additionally, reclamation standards of 600 mg/kg chloride and 100 mg/kg TPH were applied to the top four feet of the impacted pasture area, per 19.15.29.13.D (1) NMAC. The pasture has been backfilled with locally procured topsoil and recontoured to match site existing conditions. The pasture will be reseeded with a BLM approved seed mix and monitored for vegetation growth. Notifications to NMOCD are included in Appendix B.

XTO submitted a closure report for Incident Number NAPP2126045836 on February 8, 2022, NMOCD denied the Closure Request. XTO filed a hearing request (Case Number 22700) in response to the denial. As an alternative to a hearing, XTO and NMOCD agreed, among other things, to the following activity related to the impacted portion of the lease road:

- XTO agreed to vertically delineate the lease road within the existing horizontal delineation area at four feet below ground surface (bgs) to characterize the soil at four feet bgs.

PROPOSED DELINEATION WORK PLAN

To delineate the lease road, XTO plans to use Ensolum, LLC to complete the following delineation activities along the impacted portion of the lease road:

- Vertical delineation will be completed at five locations on the lease road. Potholes will be advanced via backhoe to a depth of 4 feet bgs at the locations of previously collected excavation confirmation floor samples FS15, FS16, FS17, FS29, and FS30. The proposed vertical delineation locations are shown on Figure 1.
- Discrete delineation samples will be collected from each pothole at a depth of 4 feet bgs to determine the content of the soil at 4 feet bgs. The delineation samples will be submitted for laboratory analysis of BTEX, TPH, and chloride.
- Impacted soil identified in the relevant portion of the lease road will be addressed during final reclamation activities upon abandonment of the road, which shall be deemed to occur when all wells being accessed by this portion of the road have been plugged and abandoned.

Upon approval in the revised web portal of this delineation plan with respect to the road and well pad, XTO intends to complete the delineation activities within 90 days of the date of approval of this Delineation Work Plan by the NMOCD.

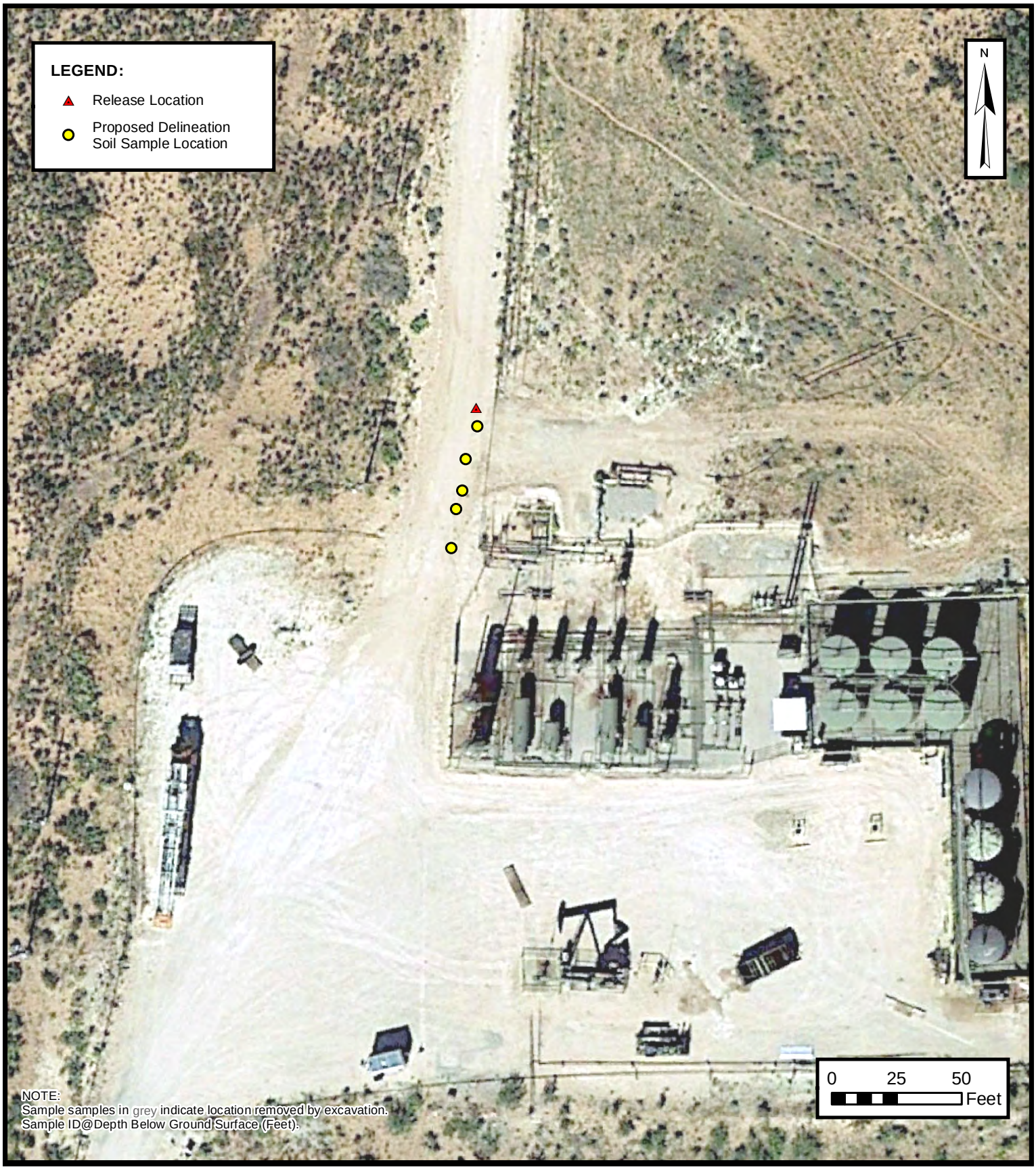
If you have any questions or comments, please contact Ms. Adrian Baker at (432) 236-3808 or adrian.baker@exxonmobil.com.

Respectfully,

Adrian Baker
Environmental Coordinator
XTO Energy, Incorporated
432-236-3808
adrian.baker@exxonmobil.com

Appendices:

Figure 1	Proposed Delineation Soil Sample Locations
Appendix A	Closure Report



ENSOLUM
Environmental & Hydrogeologic Consultants

PROPOSED DELINEATION SOIL SAMPLE LOCATIONS

XTO ENERGY, INC
PLU 293 FLOW LINE
NAPP2126045826
UNIT J SEC 21 T24S R30E
Eddy County, New Mexico

FIGURE
1

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

February 2, 2022

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

RE: Closure Request
PLU 293 Flow Line
Incident Number NAPP2126045826
Eddy County, New Mexico

To Whom it May Concern:

WSP USA Inc. (WSP) on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, excavation, and soil sampling activities at the Poker Lake Unit (PLU) 293 Flow Line (Site) in Unit J, Section 21, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, excavation, and soil sampling activities was to address impacts to soil following the release of crude oil and produced water at the Site. Based on the excavation activities and laboratory analytical results from the soil sampling events, XTO is submitting this Closure Request, describing remediation that has occurred and requesting no further action (NFA) for Incident Number NAPP2126045826.

RELEASE BACKGROUND

On September 5, 2021, a flow line failed due to corrosion, resulting in the release of 5.88 barrels (bbls) of crude oil and 67.57 bbls of produced water onto the well pad, pad entrance, and pasture area north of the pad. A vacuum truck was immediately dispatched to the Site to recover freestanding fluids; approximately 4.4 bbls of crude oil and 50.6 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) via email on September 6, 2021 and submitted a Release Notification Form C-141 (Form C-141) on September 17, 2021. The release was assigned Incident Number NAPP2126045826.

SITE CHARACTERIZATION

WSP characterized the Site according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geologic Survey (USGS) well 321214103525501, located approximately 0.2 miles northeast of the Site. The groundwater well has a reported depth to groundwater of 339 feet bgs. The closest New Mexico Office of the State

Engineer (NMOSE) groundwater well is C-03960, located 0.3 miles northwest of the Site. The groundwater well has a reported depth to groundwater of 250 feet bgs, the depth to water was most recently measured in November 2016. All wells used for depth to groundwater determination are depicted on Figure 1 and the associated well records are included in Attachment 1.

The closest continuously flowing water or significant watercourse to the Site is a dry wash, located approximately 578 feet south of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

CLOSURE CRITERIA

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

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

Additionally, a reclamation standard of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top four feet of the subsurface, per NMAC 19.15.29.13.D (1) for the top four feet of areas that will be reclaimed following remediation.

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On October 6, 2021, WSP personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. WSP personnel collected six preliminary assessment soil samples (SS01 through SS06) within the release extent from a depth of 0.5 feet bgs to assess the lateral extent of impacted soil. Soil from the preliminary soil samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positing System (GPS) and are presented on Figure 2.

The preliminary soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, and method of analysis and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for preliminary soil samples SS05 and SS06 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for preliminary soil samples SS01 through SS04 indicated that TPH-GRO/TPH-DRO, TPH, and chloride concentrations exceeded the Closure Criteria and/or the reclamation standard for samples collected from the top four feet of pasture areas. Based on visible staining in the release area, elevated field screening results, and laboratory analytical results for the preliminary soil samples, delineation and excavation activities were warranted.

DELINEATION SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

On November 3, 2021, WSP personnel were at the Site to oversee delineation activities as indicated by visual observations, field screening activities, and laboratory analytical results for the preliminary soil samples.

Potholes PH01 through PH05 were advanced via backhoe to a depth of 4 feet bgs within the release extent, to assess the lateral and vertical extent of impacted soil. Delineation soil samples were collected from each pothole from depths ranging from 1-foot to 4 feet bgs. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 2. The potholes and delineation soil sample locations are presented on Figure 2. The delineation soil samples were collected, handled, and analyzed as described above at Eurofins in Carlsbad, New Mexico. Photographic documentation was conducted during the Site visits. A photographic log is included in Attachment 3.

Laboratory analytical results for the delineation soil samples from potholes PH03, PH04, and PH05 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for the delineation soil samples collected from potholes PH01 and PH02 indicated that TPH-GRO/TPH-DRO, TPH, and chloride concentrations exceeded the Closure Criteria and/or the reclamation standards for samples collected from the top four feet of pasture areas.

EXCAVATION SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

Between November 10, 2021 and January 11, 2022, WSP personnel returned to the Site to oversee excavation activities based on field screening activities and laboratory analytical results for the preliminary and delineation soil samples.

Excavation activities were completed to remove the impacted soil identified in preliminary samples SS01 through SS04 and potholes PH01 and PH02. Excavation activities were performed using track-mounted backhoe and transport vehicle. To direct excavation activities, WSP screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. The excavation was completed to depths ranging from 0.5 feet bgs (on the well pad) to 4 feet bgs (in the pasture). Following removal of impacted soil, WSP collected 5-point composite soil samples every 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS30 and FS14A were collected from the floor of the excavation from depths ranging from 0.5 feet to 4 feet bgs. Composite sidewall soil samples SW01 through SW10 were collected from the sidewalls of the deeper pasture excavation, from depths ranging from ground surface to 4 feet bgs. Sidewall samples were not collected from the shallow areas of the well pad excavation, floor samples collected from these areas were also representative of the sidewalls. The excavation soil samples were collected, handled, and analyzed as described above at Eurofins in Carlsbad, New Mexico. The excavation extent and excavation soil sample locations are presented on Figure 3.

Laboratory analytical results for excavation samples FS01 through FS13, FS14A, FS15 through FS30, SW01 through SW05, and SW08 through SW10, collected from the final excavation extent, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and compliant with the reclamation standards for samples collected from the top four feet of pasture areas. Laboratory analytical results for samples FS14, SW06, and SW07, collected from the pasture excavation, indicated that TPH and/or chloride concentrations initially exceeded the reclamation standard. Additional soil was removed from these areas and subsequent floor sample FS14A and subsequent sidewall samples SW09 and SW10 were compliant. The laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Attachment 4.

The final excavation extent measured approximately 5,980 square feet. A total of approximately 460 cubic yards of impacted soil were removed during excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility located in Hobbs, New Mexico. After the completion of confirmation sampling, the excavation was secured with fencing.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the September 5, 2021 release of crude oil and produced water. Based on the laboratory analytical results for the preliminary and delineation soil samples, impacted soil was excavated. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria. In addition, excavation soil samples collected from the top four feet of pasture areas were compliant with the reclamation standard.

Initial response efforts and excavation of impacted soil have mitigated impacts at the Site. Depth to groundwater has been determined to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. Based on the excavation soil sample analytical results, no further remediation was required. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. Following backfill, the disturbed pasture areas will be reseeded with a Bureau of Land Management (BLM) approved seed-mix. XTO respectfully requests NFA for Incident Number NAPP2126045826.

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

Sincerely,

WSP USA Inc.

Hadlie Green
Assistant Consultant, Geologist

Aimee Cole
Sr. Consultant, Environmental Scientist

cc: Shelby Pennington, XTO
Adrian Baker, XTO
Bureau of Land Management

Attachments:

Figure 1	Site Location Map
Figure 2	Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Referenced Well Records
Attachment 2	Lithologic/Sampling Logs
Attachment 3	Photographic Log
Attachment 4	Laboratory Analytical Reports

FIGURES

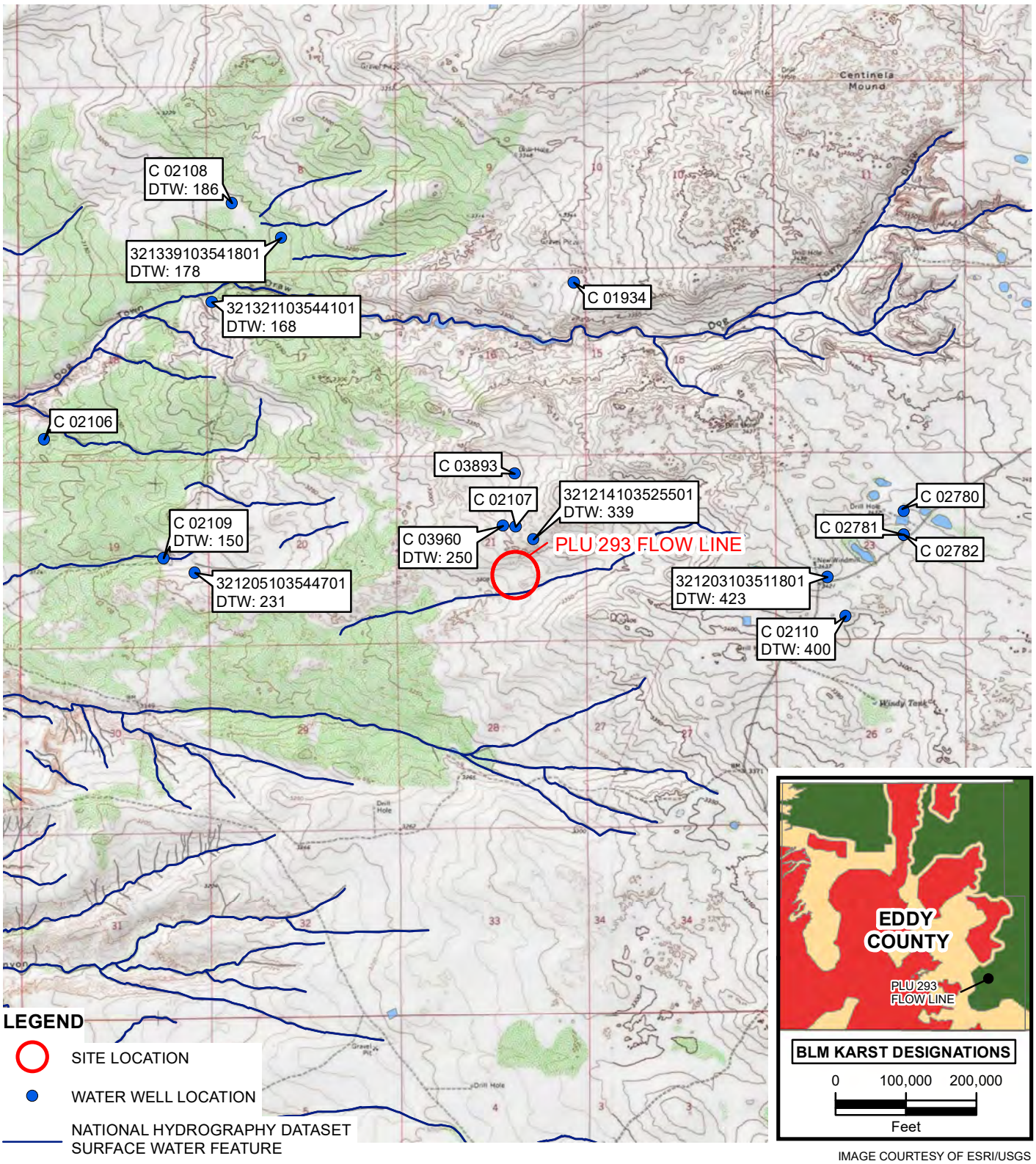


IMAGE COURTESY OF ESRI/USGS

LEGEND

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

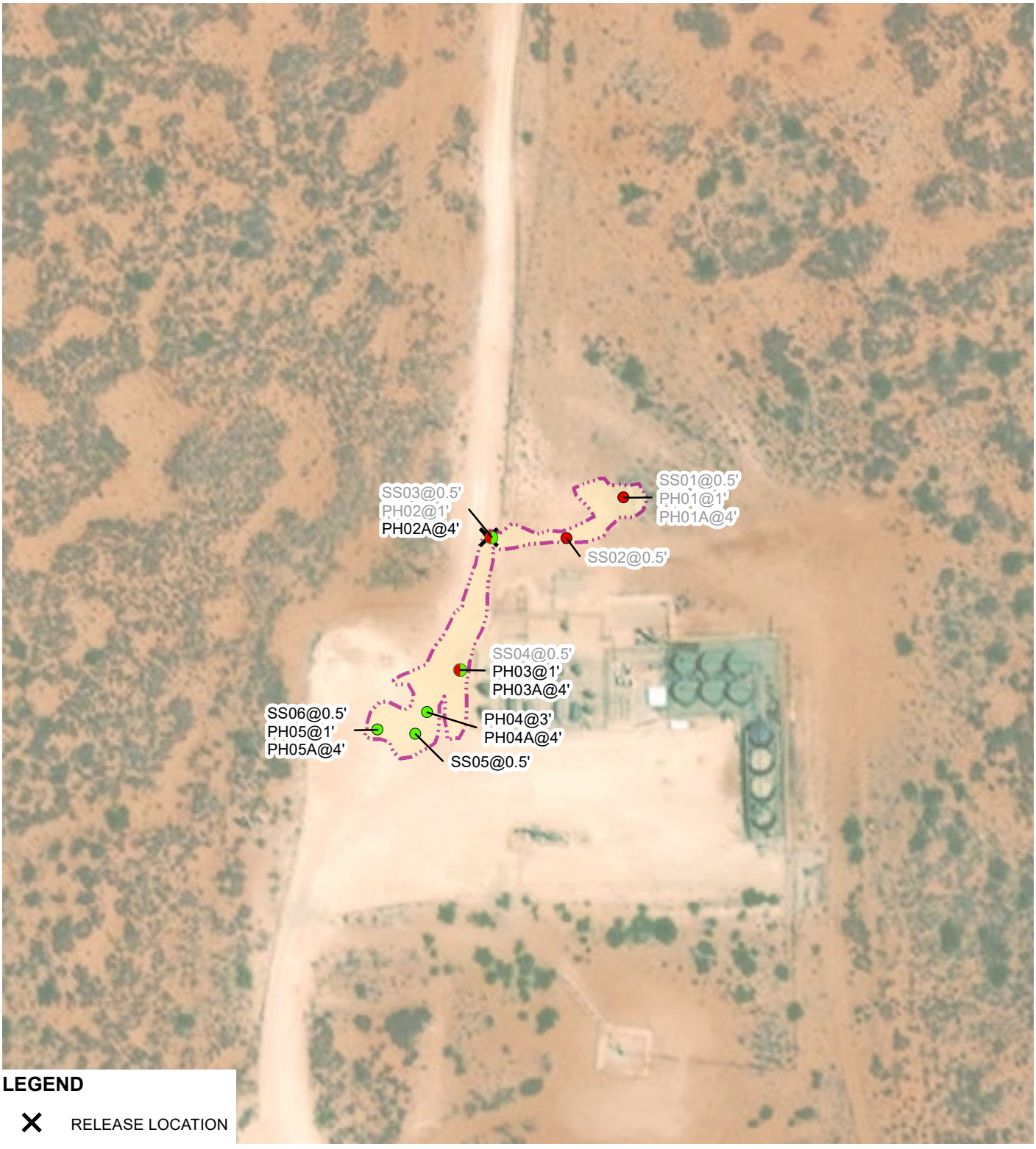
DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT
TD: TOTAL DEPTH IN FEET
NOTE: INCIDENT NUMBER NAPP2126045826

0 4,000 8,000
Feet

N

FIGURE 1
SITE LOCATION MAP
PLU 293 FLOW LINE
UNIT J SEC 21 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC

P:\XTO Energy\GIS\31403236.020.0129.08_POKER LAKE UNIT 293\MXD\31403236.020.0129.08_FIG01_SL_RECEPTOR_2021.mxd



LEGEND

- RELEASE LOCATION
- PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS PREVIOUSLY EXCEEDING APPLICABLE CLOSURE CRITERIA
- SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- RELEASE EXTENT

NOTE: INCIDENT NUMBER NAPP2126045826
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
TEXT: INDICATES SOIL REPRESENTED BY SAMPLE THAT WAS REMOVED

IMAGE COURTESY OF ESRI

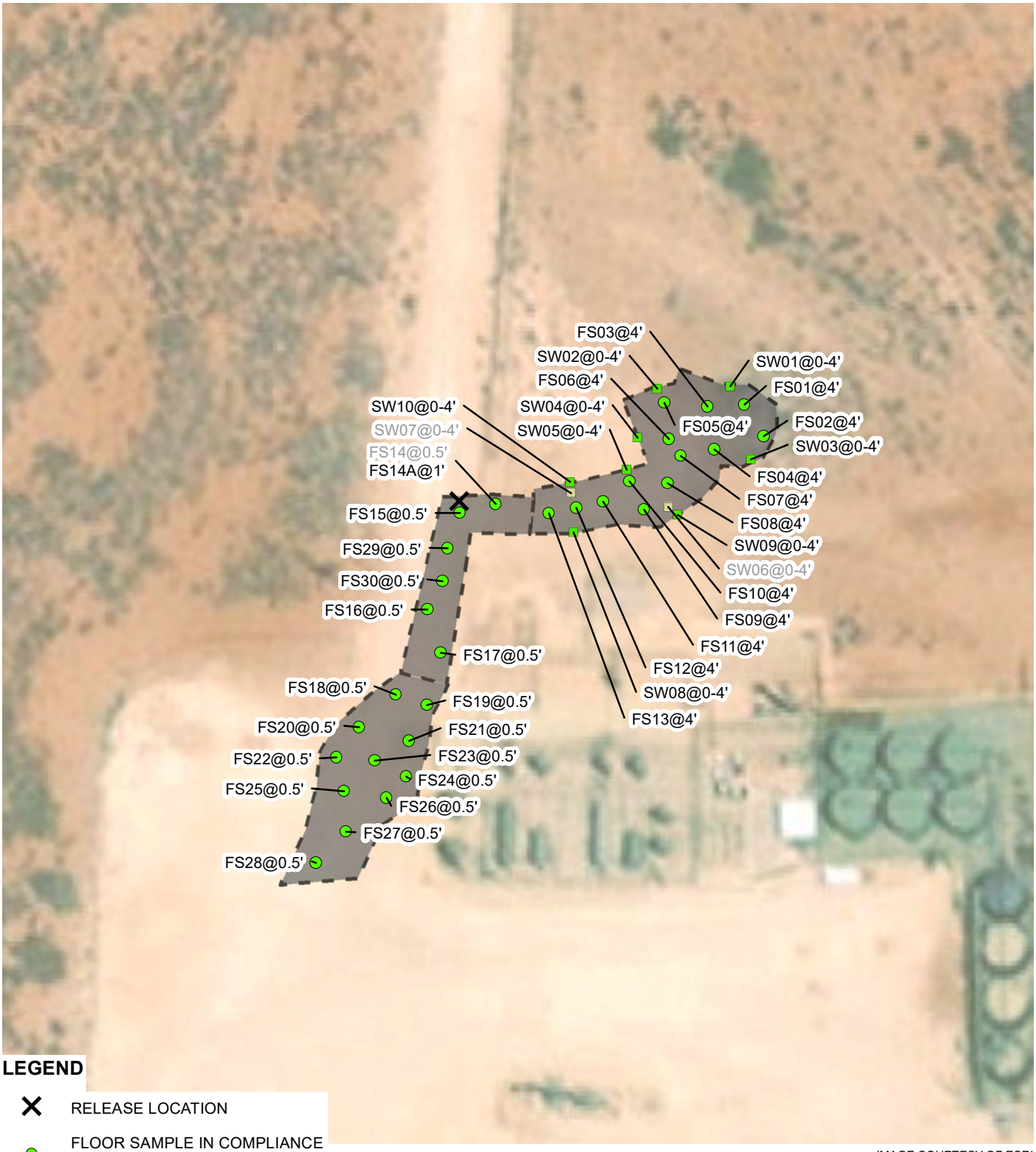
0 100 200
Feet

N

FIGURE 2
SOIL SAMPLE LOCATIONS
PLU 293 FLOW LINE
UNIT J SEC 21 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

wsp

P:\XTO Energy\GIS\31403236.020.0129.08_POKER LAKE UNIT 293\MXD\31403236.020.0129.08_FIG02_SS_LOC_2022.mxd



LEGEND

- RELEASE LOCATION
- FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- SIDEWALL SAMPLE WITH CONCENTRATIONS PREVIOUSLY EXCEEDING APPLICABLE CLOSURE CRITERIA AND HAS BEEN EXCAVATED
- SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- EXCAVATION EXTENT

NOTE: INCIDENT NUMBER NAPP2126045826
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
TEXT: INDICATES SOIL REPRESENTED BY SAMPLE THAT WAS REMOVED

IMAGE COURTESY OF ESRI

0 50 100
Feet

N

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
PLU 293 FLOW LINE
UNIT J SEC 21 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

wsp

P:\XTO Energy\GIS\31403236.020.0129.08_POKER LAKE UNIT 293\MXD\31403236.020.0129.08_FIG03_EXCAVATION_2022.mxd

TABLES

Table 1

Soil Analytical Results
PLU 293 Flow Line
Incident Number : NAPP2126045826
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
Surface Samples										
SS01	10/06/2021	0.5	<0.0399	12.8	4,560	472	480	**5,032**	**5,510**	**24,800***
SS02	10/06/2021	0.5	<0.00201	0.0212	420	<50.0	143	420	563	19,500*
SS03	10/06/2021	0.5	<0.00201	0.00456	3,090	<49.9	505	**3,090**	**3,600**	19,600
SS04	10/06/2021	0.5	<0.00200	<0.00400	1,620	<49.8	334	**1,620**	1,950	6,290
SS05	10/06/2021	0.5	<0.00200	<0.00399	144	<50.0	59.4	144	203	1,230
SS06	10/06/2021	0.5	<0.00200	<0.00399	88.5	<49.9	<49.9	88.5	88.5	2,600
Delineation Samples										
PH01	11/03/2021	1	<0.00200	<0.00399	301	<49.9	<49.9	301	301	117*
PH01A	11/03/2021	4	<0.00199	<0.00398	81.7	<49.9	<49.9	81.7	81.7	1760*
PH02	11/03/2021	1	<0.00199	<0.00398	2,450	<50.0	278	**2,450**	**2,730**	14,500
PH02A	11/03/2021	4	<0.00200	<0.00399	<50.0	476	<50.0	476	476	276
PH03	11/03/2021	1	<0.00199	<0.00398	<49.8	<49.8	<49.8	49.8	<49.8	1,070
PH03A	11/03/2021	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	50	<50.0	133
PH04	11/03/2021	3	<0.00200	<0.00400	<49.8	<49.8	<49.8	49.8	<49.8	2,390
PH04A	11/03/2021	4	<0.00201	<0.00402	<50.0	<50.0	<50.0	50	<50.0	2,770
PH05	11/03/2021	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	49.9	<49.9	900
PH05A	11/03/2021	4	<0.00200	<0.00401	<49.9	<49.9	<49.9	49.9	<49.9	22.7
Excavation Floor Samples										
FS01	11/10/2021	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	50.0	<50.0	104
FS02	11/10/2021	4	<0.00198	<0.00397	<50.0	<50.0	<50.0	50.0	<50.0	636

Table 1

Soil Analytical Results
PLU 293 Flow Line
Incident Number : NAPP2126045826
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
FS03	11/10/2021	4	<0.00200	<0.00401	<50.0	<50.0	<50.0	50.0	<50.0	447
FS04	11/10/2021	4	<0.00200	<0.00399	<49.9	<49.9	<49.9	49.9	<49.9	5,530
FS05	11/10/2021	4	<0.00199	<0.00398	<49.8	<49.8	<49.8	49.8	<49.8	858
FS06	11/10/2021	4	<0.00200	<0.00399	<49.9	<49.9	<49.9	49.9	<49.9	76.0
FS07	11/10/2021	4	<0.00200	<0.00400	<49.9	<49.9	<49.9	49.9	<49.9	149
FS08	11/23/2021	4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	1,330
FS09	11/23/2021	4	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	103
FS10	11/23/2021	4	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	290
FS11	11/23/2021	4	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	351
FS12	11/23/2021	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	73.8
FS13	11/23/2021	4	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	95.3
FS14	11/22/2021	0.5	<0.00200	<0.00400	121	<49.9	<49.9	121	121	671
FS14A	01/05/2022	1	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	34.1
FS15	11/22/2021	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	3,560
FS16	11/22/2021	0.5	<0.00200	<0.00399	69.8	<50.0	<50.0	69.8	69.8	991
FS17	11/22/2021	0.5	<0.00198	<0.00396	55.8	<49.9	<49.9	55.8	55.8	1,500
FS18	11/23/2021	0.5	<0.00199	<0.00398	60.9	<50.0	<50.0	60.9	60.9	3,460
FS19	11/23/2021	0.5	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	972
FS20	11/23/2021	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	3,230

Table 1

Soil Analytical Results
PLU 293 Flow Line
Incident Number : NAPP2126045826
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
FS21	11/23/2021	0.5	<0.00200	<0.00401	53.9	<49.9	<49.9	53.9	53.9	1,040
FS22	11/23/2021	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	345
FS23	11/23/2021	0.5	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	788
FS24	11/23/2021	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	616
FS25	11/23/2021	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	1,120
FS26	11/23/2021	0.5	<0.00202	<0.00403	60.6	<50.0	<50.0	60.6	60.6	1,470
FS27	11/23/2021	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	1,070
FS28	11/23/2021	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	157
FS29	01/05/2022	0.5	<0.00200	<0.00401	91.7	<50.0	<50.0	91.7	91.7	2,220
FS30	01/05/2022	0.5	<0.00198	<0.00396	99.9	<50.0	<50.0	99.9	99.9	1,270
Excavation Sidewall Samples										
SW01	11/04/2021	0-4	<0.00200	<0.00399	<50.0	<50.0	<50.0	50.0	<50.0	70.1*
SW02	11/04/2021	0-4	<0.00199	<0.00398	<50.0	<50.0	<50.0	50.0	<50.0	40.1*
SW03	11/04/2021	0-4	<0.00200	<0.00399	<49.9	<49.9	<49.9	49.9	<49.9	57.9*

Table 1

Soil Analytical Results
PLU 293 Flow Line
Incident Number : NAPP2126045826
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
SW04	11/04/2021	0-4	<0.00199	<0.00398	<49.9	<49.9	<49.9	49.9	<49.9	53.6*
SW05	11/05/2021	0-4	<0.00199	<0.00398	<49.8	<49.8	<49.8	49.8	<49.8	86*
SW06	01/05/2022	0-3	<0.00201	<0.00402	91.2	<49.9	<49.9	91.2	91.2	1,160*
SW07	01/05/2022	0-3	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	618*
SW08	11/05/2021	0-4	<0.00198	<0.00396	<49.9	<49.9	<49.9	49.9	<49.9	514*
SW09	01/11/2022	0-4	<0.00200	<0.00399	61.9	<50.0	<50.0	61.9	61.9	220*
SW10	01/11/2022	0-4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	375*

Notes:

ft - feet/foot
mg/kg - milligrams per kilograms
BTEX - benzene, toluene, ethylbenzene, and total xylenes
TPH - total petroleum hydrocarbons
DRO - diesel range organics
GRO - gasoline range organics
ORO - oil range organics
NMOCD - New Mexico Oil Conservation Division
NMAC - New Mexico Administrative Code
< - indicates result is less than the stated laboratory method practical quantitation limit
NE - Not Established
BOLD - indicates results exceed the higher of the background sample result or applicable regulatory standard
Greyed data represents samples that were excavated
* - indicates sample was collected in area to be reclaimed after remediation is complete;
closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg

ATTACHMENT 1: REFERENCED WELL RECORDS

USGS 321214103525501 24S.30E.21.23144

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Well Site

DESCRIPTION:

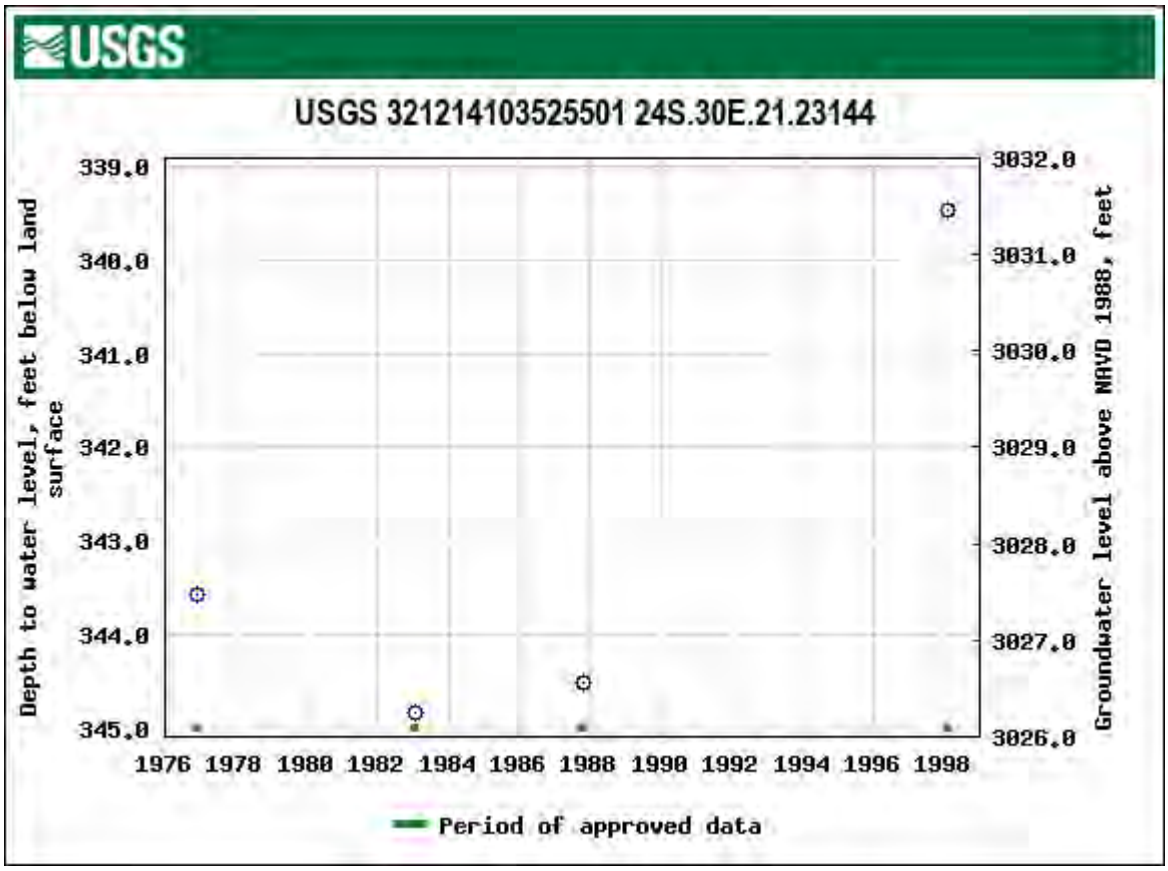
Latitude 32°12'14", Longitude 103°52'55" NAD27
Eddy County, New Mexico , Hydrologic Unit 13060011
Well depth: not determined.
Land surface altitude: 3,371 feet above NAVD88.
Well completed in "Pecos River Basin alluvial aquifer" (N100PCSRVR) national aquifer.
Well completed in "Rustler Formation" (312RSLR) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1976-12-01	1998-01-28	4
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries


USGS
USGS 321214103525501 24S.30E.21.23144
Depth to water level, feet below land surface
339.0
340.0
341.0
342.0
343.0
344.0
345.0
3032.0
3031.0
3030.0
3029.0
3028.0
3027.0
3026.0
Groundwater level above NAVD 1988, feet
1976 1978 1980 1982 1984 1986 1988 1990 1992 1994 1996 1998
Period of approved data

New Mexico Office of the State Engineer
Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 03960 POD1	1	3	2	21	24S	30E	605062	3563712

Driller License: 1753 **Driller Company:** VANGUARD WATER WELLS

Driller Name: JACOBO FRIESSEN

Drill Start Date: 11/12/2016 **Drill Finish Date:** 11/12/2016 **Plug Date:**

Log File Date: 11/17/2016 **PCW Rcv Date:** **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: 6.00 **Depth Well:** 475 feet **Depth Water:** 250 feet

Water Bearing Stratifications:	Top	Bottom	Description
	182	250	Sandstone/Gravel/Conglomerate
	402	460	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	250	290
	395	435

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

ATTACHMENT 2: LITHOLOGIC/SAMPLING LOGS

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH or PH Name: PH01	Date: 11/02/2021
	Site Name: PLU 293 Flow Line	
	RP or Incident Number: NAPP2126045826	
	WSP Job Number: 31403236.020.0129	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: TC	Method: Backhoe
Lat/Long: 32.2020762, -103.8834508	Field Screening: Chloride, PID	Hole Diameter: 2'x2'	Total Depth: 4'
Comments:			

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
M	201.6	419.3	Y	PH01	1	1	SPSC	DARK BROWN-REDDISH SAND, STAINING, STRONG ODOR, MOIST
M	313.6	70.5	Y			2	SPSC	
M	274.4	195.4	Y			3	SPSC	
M	2,128	202.4	Y	PH01A	4	4	SP	LIGHT BROWN-REDDISH, SOME CALICHE, MOIST, STRONG ODOR

TD @ 4 ft bgs

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: PH02	Date: 11/02/2021
Site Name: PLU 293 Flow Line	
RP or Incident Number: NAPP2126045826	
WSP Job Number: 31403236.020.0129	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: TC / Method: Backhoe
Lat/Long: 32.2020010, -103.8837535 / Field Screening: Chloride, PID	Hole Diameter: 2'x2' / Total Depth: 4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
M	7,380.8	48.9	Y	PH02	1	1	SPSC	CALICHE, TAN, MOIST, SAND, REDDISH-BROWN, STAINING, STRONG ODOR
M	2,609.6	11.2	Y			2	SPSC	
M	1,736	4.4	N			3	SPSC	
M	274.4	1.7	N	PH02A	4	4	SP	CALICHE, TAN, MOIST, REDDISH-BROWN SAND, NO STAINING, SLIGHT ODOR

TD @ 4 ft bgs

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH or PH Name: PH03	Date: 11/02/2021
	Site Name: PLU 293 Flow Line	
	RP or Incident Number: NAPP2126045826	
	WSP Job Number: 31403236.020.0129	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: TC	Method: Backhoe
Lat/Long: 32.2017426, -103.8838265	Field Screening: Chloride, PID	Hole Diameter: 2'x2'	Total Depth: 4'
Comments:		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
M	1,859.2	0.2	Y	PH03	1	1	SPSC	SAND WITH CALICHE, BROWN-REDDISH, MOST, STAINING, SLIGHT ODOR
M	274.4	0.0	N			2	SPSC	SAA
M	235.2	0.0	N			3	SPSC	SAA
M	235.2	0.0	N	PH03A	4	4	SPSC	SAA

TD @ 4 ft bgs

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: PH04	Date: 11/02/2021
Site Name: PLU 293 Flow Line	
RP or Incident Number: NAPP2126045826	
WSP Job Number: 31403236.020.0129	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: TC / Method: Backhoe
Lat/Long: 32.2016606, -103.8839019 / Field Screening: Chloride, PID	Hole Diameter: 2'x2' / Total Depth: 4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
M	576.8	0.1	Y		1	1	SPSC	CALICHE SAND MIX, BROWN-REDDISH, MOIST, STAINING, NO ODOR
M	1,736	0.0	N			2	SPSC	SAA
M	2,996	0.0	N	PH04		3	SPSC	SAA
M	2,279.2	0.0	N	PH04A	4	4	SC	CALICHE SAND MIX, BROWN, MOIST, NO STAINING, NO ODOR

TD @ 4 ft bgs

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: PH05	Date: 11/02/2021
Site Name: PLU 293 Flow Line	
RP or Incident Number: NAPP2126045826	
WSP Job Number: 31403236.020.0129	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: TC / Method: Backhoe
Lat/Long: 32.2016264, -103.8840159 / Field Screening: Chloride, PID	Hole Diameter: 2'x2' / Total Depth: 4'
Comments:	

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
M	6,285.6	0.2	Y	PH05	1	1	SPSC	CALICHE SAND MIX, BROWN-REDDISH, MOIST, STAINING, NO ODOR
M	ND	0.0	N			2	SPSC	SAA
M	ND	0.0	N			3	SPSC	SAA
M	ND	0.0	N	PH05A	4	4	SC	CALICHE SAND MIX, BROWN, MOIST, NO STAINING, NO ODOR

TD @ 4 ft bgs

ATTACHMENT 3: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG		
XTO Energy, Inc.	PLU 293 Flow Line Eddy County, NM	NAPP2126045826

Photo No.	Date
1	October 6, 2021

View facing north of release extent.

Photo No.	Date
2	October 6, 2021

View facing east of release extent.

PHOTOGRAPHIC LOG		
XTO Energy, Inc.	PLU 293 Flow Line Eddy County, NM	NAPP2126045826

Photo No.	Date
3	November 23, 2021

View of the excavation extent on pad, facing north.

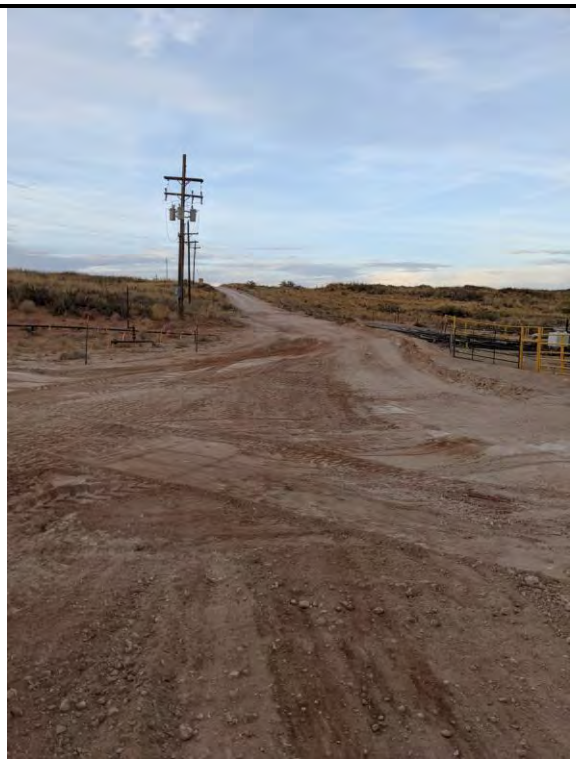


Photo No.	Date
4	November 23, 2021

View of the excavation extent in the pasture, facing north.

PHOTOGRAPHIC LOG		
XTO Energy, Inc.	PLU 293 Flow Line Eddy County, NM	NAPP2126045826

Photo No.	Date
5	November 23, 2021

View facing east of the excavation extent.

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-1378-1
Laboratory Sample Delivery Group: 31403236.020.0129
Client Project/Site: PLU 293

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

Attn: Dan Moir

JKramer

Authorized for release by:
10/14/2021 8:02:23 PM

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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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 293

Laboratory Job ID: 890-1378-1
SDG: 31403236.020.0129

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1378-1
Project/Site: PLU 293 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.
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 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

Job ID: 890-1378-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1378-1

Receipt
The samples were received on 10/7/2021 11:05 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-9114 recovered above the upper control limit for < o-Xylene>. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCV 880-9114/95), (LCS 880-8855/1-A), (LCSD 880-8855/2-A), (MB 880-8855/5-A), (880-6763-A-1-C), (880-6763-A-1-A MS) and (880-6763-A-1-B MSD).

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS01 (890-1378-1). 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.

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-9371 and analytical batch 880-9354 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 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

Client Sample ID: SS01

Lab Sample ID: 890-1378-1
Matrix: Solid
Date Collected: 10/06/21 15:02
Date Received: 10/07/21 11:05
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0399	U	0.0399		mg/Kg		10/08/21 11:00	10/13/21 16:07	20
Toluene	**0.458**		0.0399		mg/Kg		10/08/21 11:00	10/13/21 16:07	20
Ethylbenzene	**1.92**		0.0399		mg/Kg		10/08/21 11:00	10/13/21 16:07	20
m-Xylene & p-Xylene	**7.01**		0.0798		mg/Kg		10/08/21 11:00	10/13/21 16:07	20
o-Xylene	**3.42**		0.0399		mg/Kg		10/08/21 11:00	10/13/21 16:07	20
Xylenes, Total	**10.4**		0.0798		mg/Kg		10/08/21 11:00	10/13/21 16:07	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*226*	*S1+*	*70 - 130*	*10/08/21 11:00*	*10/13/21 16:07*	*20*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*10/08/21 11:00*	*10/13/21 16:07*	*20*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**12.8**		0.0798		mg/Kg			10/13/21 13:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**5510**		49.9		mg/Kg			10/11/21 13:34	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	**472**		49.9		mg/Kg		10/13/21 11:33	10/14/21 02:16	1
Diesel Range Organics (Over C10-C28)	**4560**		49.9		mg/Kg		10/13/21 11:33	10/14/21 02:16	1
Oil Range Organics (Over C28-C36)	**480**		49.9		mg/Kg		10/13/21 11:33	10/14/21 02:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*131*	*S1+*	*70 - 130*	*10/13/21 11:33*	*10/14/21 02:16*	*1*
o-Terphenyl	*124*		*70 - 130*	*10/13/21 11:33*	*10/14/21 02:16*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**24800**		249		mg/Kg			10/14/21 10:44	50

Client Sample ID: SS02

Lab Sample ID: 890-1378-2
Matrix: Solid
Date Collected: 10/06/21 15:10
Date Received: 10/07/21 11:05
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		10/08/21 11:00	10/13/21 19:11	1
Toluene	<0.00201	U	0.00201		mg/Kg		10/08/21 11:00	10/13/21 19:11	1
Ethylbenzene	**0.00238**		0.00201		mg/Kg		10/08/21 11:00	10/13/21 19:11	1
m-Xylene & p-Xylene	**0.0136**		0.00402		mg/Kg		10/08/21 11:00	10/13/21 19:11	1
o-Xylene	**0.00526**		0.00201		mg/Kg		10/08/21 11:00	10/13/21 19:11	1
Xylenes, Total	**0.0189**		0.00402		mg/Kg		10/08/21 11:00	10/13/21 19:11	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

Client Sample ID: SS02

Lab Sample ID: 890-1378-2
Matrix: Solid
Date Collected: 10/06/21 15:10
Date Received: 10/07/21 11:05
Sample Depth: 0.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*10/08/21 11:00*	*10/13/21 19:11*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*10/08/21 11:00*	*10/13/21 19:11*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0212**		0.00402	mg/Kg			10/11/21 15:20	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**563**		50.0	mg/Kg			10/11/21 13:34	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		10/13/21 11:33	10/14/21 02:37	1
Diesel Range Organics (Over C10-C28)	**420**		50.0	mg/Kg		10/13/21 11:33	10/14/21 02:37	1
Oil Range Organics (Over C28-C36)	**143**		50.0	mg/Kg		10/13/21 11:33	10/14/21 02:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*98*		*70 - 130*	*10/13/21 11:33*	*10/14/21 02:37*	*1*
o-Terphenyl	*107*		*70 - 130*	*10/13/21 11:33*	*10/14/21 02:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**19500**		99.6	mg/Kg			10/14/21 10:50	20

Client Sample ID: SS03

Lab Sample ID: 890-1378-3
Matrix: Solid
Date Collected: 10/06/21 15:20
Date Received: 10/07/21 11:05
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		10/08/21 11:00	10/10/21 21:06	1
Toluene	<0.00201	U	0.00201	mg/Kg		10/08/21 11:00	10/10/21 21:06	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		10/08/21 11:00	10/10/21 21:06	1
m-Xylene & p-Xylene	**0.00456**		0.00402	mg/Kg		10/08/21 11:00	10/10/21 21:06	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		10/08/21 11:00	10/10/21 21:06	1
Xylenes, Total	**0.00456**		0.00402	mg/Kg		10/08/21 11:00	10/10/21 21:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*224*	*S1+*	*70 - 130*	*10/08/21 11:00*	*10/10/21 21:06*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*10/08/21 11:00*	*10/10/21 21:06*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00456**		0.00402	mg/Kg			10/11/21 15:20	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

Client Sample ID: SS03

Lab Sample ID: 890-1378-3
Matrix: Solid
Date Collected: 10/06/21 15:20
Date Received: 10/07/21 11:05
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**3600**		49.9		mg/Kg			10/11/21 13:34	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		10/13/21 11:33	10/14/21 02:57	1
Diesel Range Organics (Over C10-C28)	**3090**		49.9		mg/Kg		10/13/21 11:33	10/14/21 02:57	1
Oil Range Organics (Over C28-C36)	**505**		49.9		mg/Kg		10/13/21 11:33	10/14/21 02:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*10/13/21 11:33*	*10/14/21 02:57*	*1*
o-Terphenyl	*132*	*S1+*	*70 - 130*	*10/13/21 11:33*	*10/14/21 02:57*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**19600**		99.4		mg/Kg			10/14/21 10:57	20

Client Sample ID: SS04

Lab Sample ID: 890-1378-4
Matrix: Solid
Date Collected: 10/06/21 15:35
Date Received: 10/07/21 11:05
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/08/21 11:00	10/10/21 21:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/08/21 11:00	10/10/21 21:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/08/21 11:00	10/10/21 21:33	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/08/21 11:00	10/10/21 21:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/08/21 11:00	10/10/21 21:33	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/08/21 11:00	10/10/21 21:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*188*	*S1+*	*70 - 130*	*10/08/21 11:00*	*10/10/21 21:33*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*10/08/21 11:00*	*10/10/21 21:33*	*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			10/11/21 15:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1950**		49.8		mg/Kg			10/11/21 13:34	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		10/13/21 11:33	10/14/21 03:17	1
Diesel Range Organics (Over C10-C28)	**1620**		49.8		mg/Kg		10/13/21 11:33	10/14/21 03:17	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

Client Sample ID: SS04

Lab Sample ID: 890-1378-4
Matrix: Solid
Date Collected: 10/06/21 15:35
Date Received: 10/07/21 11:05
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	**334**		49.8		mg/Kg		10/13/21 11:33	10/14/21 03:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*10/13/21 11:33*	*10/14/21 03:17*	*1*
o-Terphenyl	*120*		*70 - 130*	*10/13/21 11:33*	*10/14/21 03:17*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6290**		49.9		mg/Kg			10/14/21 11:03	10

Client Sample ID: SS05

Lab Sample ID: 890-1378-5
Matrix: Solid
Date Collected: 10/06/21 15:40
Date Received: 10/07/21 11:05
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/08/21 11:00	10/10/21 21:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/08/21 11:00	10/10/21 21:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/08/21 11:00	10/10/21 21:59	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/08/21 11:00	10/10/21 21:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/08/21 11:00	10/10/21 21:59	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/08/21 11:00	10/10/21 21:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*202*	*S1+*	*70 - 130*	*10/08/21 11:00*	*10/10/21 21:59*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*10/08/21 11:00*	*10/10/21 21:59*	*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			10/11/21 15:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**203**		50.0		mg/Kg			10/13/21 14:23	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		10/13/21 11:33	10/14/21 03:37	1
Diesel Range Organics (Over C10-C28)	**144**		50.0		mg/Kg		10/13/21 11:33	10/14/21 03:37	1
Oil Range Organics (Over C28-C36)	**59.4**		50.0		mg/Kg		10/13/21 11:33	10/14/21 03:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*10/13/21 11:33*	*10/14/21 03:37*	*1*
o-Terphenyl	*118*		*70 - 130*	*10/13/21 11:33*	*10/14/21 03:37*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

Client Sample ID: SS05

Lab Sample ID: 890-1378-5
Matrix: Solid
Date Collected: 10/06/21 15:40
Date Received: 10/07/21 11:05
Sample Depth: 0.5

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1230**		5.00		mg/Kg			10/14/21 11:09	1

Client Sample ID: SS06

Lab Sample ID: 890-1378-6
Matrix: Solid
Date Collected: 10/06/21 15:50
Date Received: 10/07/21 11:05
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/08/21 11:00	10/10/21 22:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/08/21 11:00	10/10/21 22:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/08/21 11:00	10/10/21 22:25	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/08/21 11:00	10/10/21 22:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/08/21 11:00	10/10/21 22:25	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/08/21 11:00	10/10/21 22:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*188*	*S1+*	*70 - 130*	*10/08/21 11:00*	*10/10/21 22:25*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*10/08/21 11:00*	*10/10/21 22:25*	*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			10/11/21 15:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**88.5**		49.9		mg/Kg			10/13/21 14:23	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		10/13/21 11:33	10/14/21 03:57	1
Diesel Range Organics (Over C10-C28)	**88.5**		49.9		mg/Kg		10/13/21 11:33	10/14/21 03:57	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/13/21 11:33	10/14/21 03:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*10/13/21 11:33*	*10/14/21 03:57*	*1*
o-Terphenyl	*113*		*70 - 130*	*10/13/21 11:33*	*10/14/21 03:57*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2600**		25.2		mg/Kg			10/14/21 10:17	5

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 293

Job ID: 890-1378-1
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)
880-6763-A-1-A MS	Matrix Spike	177 S1+	118
880-6763-A-1-B MSD	Matrix Spike Duplicate	170 S1+	123
890-1374-A-1-G MSD	Matrix Spike Duplicate	113	81
890-1374-A-1-I MS	Matrix Spike	121	85
890-1378-1	SS01	226 S1+	72
890-1378-2	SS02	116	78
890-1378-3	SS03	224 S1+	77
890-1378-4	SS04	188 S1+	99
890-1378-5	SS05	202 S1+	107
890-1378-6	SS06	188 S1+	116
LCS 880-8855/1-A	Lab Control Sample	139 S1+	102
LCS 880-9327/1-A	Lab Control Sample	112	85
LCSD 880-8855/2-A	Lab Control Sample Dup	134 S1+	103
LCSD 880-9327/2-A	Lab Control Sample Dup	118	83
MB 880-8855/5-A	Method Blank	98	101
MB 880-8911/5-A	Method Blank	93	102
MB 880-9327/5-A	Method Blank	110	71

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)
890-1370-A-1-E MS	Matrix Spike	115	115
890-1370-A-1-F MSD	Matrix Spike Duplicate	112	111
890-1378-1	SS01	131 S1+	124
890-1378-2	SS02	98	107
890-1378-3	SS03	122	132 S1+
890-1378-4	SS04	115	120
890-1378-5	SS05	113	118
890-1378-6	SS06	104	113
LCS 880-9371/2-A	Lab Control Sample	81	82
LCSD 880-9371/3-A	Lab Control Sample Dup	86	86
MB 880-9371/1-A	Method Blank	107	123

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-8855/5-A
Matrix: Solid
Analysis Batch: 9114

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8855

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/05/21 11:00	10/10/21 12:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/05/21 11:00	10/10/21 12:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/05/21 11:00	10/10/21 12:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/05/21 11:00	10/10/21 12:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/05/21 11:00	10/10/21 12:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/05/21 11:00	10/10/21 12:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*10/05/21 11:00*	*10/10/21 12:22*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*10/05/21 11:00*	*10/10/21 12:22*	*1*

Lab Sample ID: LCS 880-8855/1-A
Matrix: Solid
Analysis Batch: 9114

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8855

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1069		mg/Kg		107	70 - 130		
Toluene			0.100	0.1069		mg/Kg		107	70 - 130		
Ethylbenzene			0.100	0.1073		mg/Kg		107	70 - 130		
m-Xylene & p-Xylene			0.200	0.2318		mg/Kg		116	70 - 130		
o-Xylene			0.100	0.1180		mg/Kg		118	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*139*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-8855/2-A
Matrix: Solid
Analysis Batch: 9114

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 8855

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1068		mg/Kg		107	70 - 130	0	35
Toluene			0.100	0.1114		mg/Kg		111	70 - 130	4	35
Ethylbenzene			0.100	0.1094		mg/Kg		109	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2374		mg/Kg		119	70 - 130	2	35
o-Xylene			0.100	0.1228		mg/Kg		123	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*134*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 880-6763-A-1-A MS
Matrix: Solid
Analysis Batch: 9114

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 8855

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00201	U	0.100	0.07600		mg/Kg		76	70 - 130		
Toluene	<0.00201	U	0.100	0.08137		mg/Kg		81	70 - 130		

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

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

Lab Sample ID: 880-6763-A-1-A MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 9114 — **Prep Batch: 8855**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00201	U	0.100	0.08309		mg/Kg		83	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.201	0.1800		mg/Kg		90	70 - 130
o-Xylene	<0.00201	U	0.100	0.09335		mg/Kg		93	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*177*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*

Lab Sample ID: 880-6763-A-1-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 9114 — **Prep Batch: 8855**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.101	0.08379		mg/Kg		83	70 - 130	10	35
Toluene	<0.00201	U	0.101	0.08569		mg/Kg		85	70 - 130	5	35
Ethylbenzene	<0.00201	U	0.101	0.09140		mg/Kg		91	70 - 130	10	35
m-Xylene & p-Xylene	<0.00402	U	0.202	0.1982		mg/Kg		98	70 - 130	10	35
o-Xylene	<0.00201	U	0.101	0.1018		mg/Kg		101	70 - 130	9	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*170*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*

Lab Sample ID: MB 880-8911/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 9114 — **Prep Batch: 8911**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/05/21 11:12	10/09/21 22:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/05/21 11:12	10/09/21 22:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/05/21 11:12	10/09/21 22:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/05/21 11:12	10/09/21 22:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/05/21 11:12	10/09/21 22:46	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/05/21 11:12	10/09/21 22:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*10/05/21 11:12*	*10/09/21 22:46*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*10/05/21 11:12*	*10/09/21 22:46*	*1*

Lab Sample ID: MB 880-9327/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 9368 — **Prep Batch: 9327**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/12/21 16:16	10/13/21 12:41	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/12/21 16:16	10/13/21 12:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/12/21 16:16	10/13/21 12:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/12/21 16:16	10/13/21 12:41	1

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

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

Lab Sample ID: MB 880-9327/5-A
Matrix: Solid
Analysis Batch: 9368

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9327

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/12/21 16:16	10/13/21 12:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/12/21 16:16	10/13/21 12:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*10/12/21 16:16*	*10/13/21 12:41*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*10/12/21 16:16*	*10/13/21 12:41*	*1*

Lab Sample ID: LCS 880-9327/1-A
Matrix: Solid
Analysis Batch: 9368

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9327

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08846		mg/Kg		88	70 - 130		
Toluene			0.100	0.08931		mg/Kg		89	70 - 130		
Ethylbenzene			0.100	0.09418		mg/Kg		94	70 - 130		
m-Xylene & p-Xylene			0.200	0.1960		mg/Kg		98	70 - 130		
o-Xylene			0.100	0.09808		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*

Lab Sample ID: LCSD 880-9327/2-A
Matrix: Solid
Analysis Batch: 9368

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9327

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09373		mg/Kg		94	70 - 130	6	35
Toluene			0.100	0.09698		mg/Kg		97	70 - 130	8	35
Ethylbenzene			0.100	0.1013		mg/Kg		101	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.2116		mg/Kg		106	70 - 130	8	35
o-Xylene			0.100	0.1068		mg/Kg		107	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*

Lab Sample ID: 890-1374-A-1-G MSD
Matrix: Solid
Analysis Batch: 9368

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 9327

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.0990	0.09429		mg/Kg		95	70 - 130	11	35
Toluene	<0.00198	U	0.0990	0.09461		mg/Kg		96	70 - 130	6	35
Ethylbenzene	<0.00198	U	0.0990	0.09854		mg/Kg		100	70 - 130	0	35
m-Xylene & p-Xylene	<0.00396	U	0.198	0.2040		mg/Kg		103	70 - 130	1	35
o-Xylene	<0.00198	U	0.0990	0.1031		mg/Kg		104	70 - 130	1	35

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

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

Lab Sample ID: 890-1374-A-1-G MSD
Matrix: Solid
Analysis Batch: 9368

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 9327

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	81		70 - 130

Lab Sample ID: 890-1374-A-1-I MS
Matrix: Solid
Analysis Batch: 9368

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 9327

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00198	U	0.100	0.08471		mg/Kg		84	70 - 130
Toluene	<0.00198	U	0.100	0.08921		mg/Kg		89	70 - 130
Ethylbenzene	<0.00198	U	0.100	0.09814		mg/Kg		98	70 - 130
m-Xylene & p-Xylene	<0.00396	U	0.201	0.2025		mg/Kg		101	70 - 130
o-Xylene	<0.00198	U	0.100	0.1018		mg/Kg		101	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	121		70 - 130
1,4-Difluorobenzene (Surr)	85		70 - 130

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

Lab Sample ID: MB 880-9371/1-A
Matrix: Solid
Analysis Batch: 9354

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9371

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		10/13/21 11:33	10/13/21 20:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/13/21 11:33	10/13/21 20:52	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/13/21 11:33	10/13/21 20:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	10/13/21 11:33	10/13/21 20:52	1
o-Terphenyl	123		70 - 130	10/13/21 11:33	10/13/21 20:52	1

Lab Sample ID: LCS 880-9371/2-A
Matrix: Solid
Analysis Batch: 9354

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9371

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1243		mg/Kg		124	70 - 130
Diesel Range Organics (Over C10-C28)			1000	848.4		mg/Kg		85	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	82		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

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

Lab Sample ID: LCSD 880-9371/3-A
Matrix: Solid
Analysis Batch: 9354

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9371

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1252		mg/Kg		125	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	831.2		mg/Kg		83	70 - 130	2	20

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

Lab Sample ID: 890-1370-A-1-E MS
Matrix: Solid
Analysis Batch: 9354

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 9371

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	1402	F1	mg/Kg		141	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1076		mg/Kg		106	70 - 130

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

Lab Sample ID: 890-1370-A-1-F MSD
Matrix: Solid
Analysis Batch: 9354

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 9371

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	1334	F1	mg/Kg		133	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	1043		mg/Kg		103	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*112*		*70 - 130*
o-Terphenyl	*111*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-9286/1-A
Matrix: Solid
Analysis Batch: 9432

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			10/14/21 08:08	1

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-9286/2-A
Matrix: Solid
Analysis Batch: 9432

Client Sample ID: Lab Control Sample
Prep Type: Soluble

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

Lab Sample ID: LCSD 880-9286/3-A
Matrix: Solid
Analysis Batch: 9432

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	255.5		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 880-7049-A-11-B MS
Matrix: Solid
Analysis Batch: 9432

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	791		2520	3557		mg/Kg		110	90 - 110		

Lab Sample ID: 880-7049-A-11-C MSD
Matrix: Solid
Analysis Batch: 9432

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	791		2520	3546		mg/Kg		109	90 - 110	0	20

Lab Sample ID: MB 880-9287/1-A
Matrix: Solid
Analysis Batch: 9434

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			10/14/21 08:19	1

Lab Sample ID: LCS 880-9287/2-A
Matrix: Solid
Analysis Batch: 9434

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 880-9287/3-A
Matrix: Solid
Analysis Batch: 9434

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	244.2		mg/Kg		98	90 - 110	1	20

Lab Sample ID: 880-7032-A-1-B MS
Matrix: Solid
Analysis Batch: 9434

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	1730		1240	3034		mg/Kg		105	90 - 110		

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-7032-A-1-C MSD
Matrix: Solid
Analysis Batch: 9434

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	1730		1240	3045		mg/Kg		106	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

GC VOA

Prep Batch: 8855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1378-1	SS01	Total/NA	Solid	5035	
890-1378-2	SS02	Total/NA	Solid	5035	
890-1378-3	SS03	Total/NA	Solid	5035	
890-1378-4	SS04	Total/NA	Solid	5035	
890-1378-5	SS05	Total/NA	Solid	5035	
890-1378-6	SS06	Total/NA	Solid	5035	
MB 880-8855/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-8855/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-8855/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-6763-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-6763-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 8911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-8911/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 9114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1378-3	SS03	Total/NA	Solid	8021B	8855
890-1378-4	SS04	Total/NA	Solid	8021B	8855
890-1378-5	SS05	Total/NA	Solid	8021B	8855
890-1378-6	SS06	Total/NA	Solid	8021B	8855
MB 880-8855/5-A	Method Blank	Total/NA	Solid	8021B	8855
MB 880-8911/5-A	Method Blank	Total/NA	Solid	8021B	8911
LCS 880-8855/1-A	Lab Control Sample	Total/NA	Solid	8021B	8855
LCSD 880-8855/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	8855
880-6763-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	8855
880-6763-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	8855

Analysis Batch: 9242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1378-2	SS02	Total/NA	Solid	Total BTEX	
890-1378-3	SS03	Total/NA	Solid	Total BTEX	
890-1378-4	SS04	Total/NA	Solid	Total BTEX	
890-1378-5	SS05	Total/NA	Solid	Total BTEX	
890-1378-6	SS06	Total/NA	Solid	Total BTEX	

Prep Batch: 9327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-9327/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-9327/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-9327/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1374-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
890-1374-A-1-I MS	Matrix Spike	Total/NA	Solid	5035	

Analysis Batch: 9368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1378-1	SS01	Total/NA	Solid	8021B	8855
890-1378-2	SS02	Total/NA	Solid	8021B	8855
MB 880-9327/5-A	Method Blank	Total/NA	Solid	8021B	9327
LCS 880-9327/1-A	Lab Control Sample	Total/NA	Solid	8021B	9327

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

GC VOA (Continued)

Analysis Batch: 9368 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-9327/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	9327
890-1374-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	9327
890-1374-A-1-I MS	Matrix Spike	Total/NA	Solid	8021B	9327

Analysis Batch: 9374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1378-1	SS01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 9189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1378-1	SS01	Total/NA	Solid	8015 NM	
890-1378-2	SS02	Total/NA	Solid	8015 NM	
890-1378-3	SS03	Total/NA	Solid	8015 NM	
890-1378-4	SS04	Total/NA	Solid	8015 NM	

Analysis Batch: 9354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1378-1	SS01	Total/NA	Solid	8015B NM	9371
890-1378-2	SS02	Total/NA	Solid	8015B NM	9371
890-1378-3	SS03	Total/NA	Solid	8015B NM	9371
890-1378-4	SS04	Total/NA	Solid	8015B NM	9371
890-1378-5	SS05	Total/NA	Solid	8015B NM	9371
890-1378-6	SS06	Total/NA	Solid	8015B NM	9371
MB 880-9371/1-A	Method Blank	Total/NA	Solid	8015B NM	9371
LCS 880-9371/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	9371
LCSD 880-9371/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	9371
890-1370-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	9371
890-1370-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	9371

Prep Batch: 9371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1378-1	SS01	Total/NA	Solid	8015NM Prep	
890-1378-2	SS02	Total/NA	Solid	8015NM Prep	
890-1378-3	SS03	Total/NA	Solid	8015NM Prep	
890-1378-4	SS04	Total/NA	Solid	8015NM Prep	
890-1378-5	SS05	Total/NA	Solid	8015NM Prep	
890-1378-6	SS06	Total/NA	Solid	8015NM Prep	
MB 880-9371/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-9371/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-9371/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1370-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1370-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 9387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1378-5	SS05	Total/NA	Solid	8015 NM	
890-1378-6	SS06	Total/NA	Solid	8015 NM	

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

HPLC/IC

Leach Batch: 9286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1378-1	SS01	Soluble	Solid	DI Leach	
890-1378-2	SS02	Soluble	Solid	DI Leach	
890-1378-3	SS03	Soluble	Solid	DI Leach	
890-1378-4	SS04	Soluble	Solid	DI Leach	
890-1378-5	SS05	Soluble	Solid	DI Leach	
MB 880-9286/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-9286/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-9286/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-7049-A-11-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-7049-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 9287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1378-6	SS06	Soluble	Solid	DI Leach	
MB 880-9287/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-9287/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-9287/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-7032-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-7032-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 9432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1378-1	SS01	Soluble	Solid	300.0	9286
890-1378-2	SS02	Soluble	Solid	300.0	9286
890-1378-3	SS03	Soluble	Solid	300.0	9286
890-1378-4	SS04	Soluble	Solid	300.0	9286
890-1378-5	SS05	Soluble	Solid	300.0	9286
MB 880-9286/1-A	Method Blank	Soluble	Solid	300.0	9286
LCS 880-9286/2-A	Lab Control Sample	Soluble	Solid	300.0	9286
LCSD 880-9286/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	9286
880-7049-A-11-B MS	Matrix Spike	Soluble	Solid	300.0	9286
880-7049-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	9286

Analysis Batch: 9434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1378-6	SS06	Soluble	Solid	300.0	9287
MB 880-9287/1-A	Method Blank	Soluble	Solid	300.0	9287
LCS 880-9287/2-A	Lab Control Sample	Soluble	Solid	300.0	9287
LCSD 880-9287/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	9287
880-7032-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	9287
880-7032-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	9287

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

Client Sample ID: SS01
Date Collected: 10/06/21 15:02
Date Received: 10/07/21 11:05

Lab Sample ID: 890-1378-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			8855	10/08/21 11:00	KL	XEN MID
Total/NA	Analysis	8021B		20	9368	10/13/21 16:07	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	9374	10/13/21 13:00	KL	XEN MID
Total/NA	Analysis	8015 NM		1	9189	10/11/21 13:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			9371	10/13/21 11:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1	9354	10/14/21 02:16	AJ	XEN MID
Soluble	Leach	DI Leach			9286	10/12/21 10:22	CH	XEN MID
Soluble	Analysis	300.0		50	9432	10/14/21 10:44	CH	XEN MID

Client Sample ID: SS02
Date Collected: 10/06/21 15:10
Date Received: 10/07/21 11:05

Lab Sample ID: 890-1378-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			8855	10/08/21 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	9368	10/13/21 19:11	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	9242	10/11/21 15:20	MR	XEN MID
Total/NA	Analysis	8015 NM		1	9189	10/11/21 13:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			9371	10/13/21 11:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1	9354	10/14/21 02:37	AJ	XEN MID
Soluble	Leach	DI Leach			9286	10/12/21 10:22	CH	XEN MID
Soluble	Analysis	300.0		20	9432	10/14/21 10:50	CH	XEN MID

Client Sample ID: SS03
Date Collected: 10/06/21 15:20
Date Received: 10/07/21 11:05

Lab Sample ID: 890-1378-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			8855	10/08/21 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	9114	10/10/21 21:06	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	9242	10/11/21 15:20	MR	XEN MID
Total/NA	Analysis	8015 NM		1	9189	10/11/21 13:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			9371	10/13/21 11:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1	9354	10/14/21 02:57	AJ	XEN MID
Soluble	Leach	DI Leach			9286	10/12/21 10:22	CH	XEN MID
Soluble	Analysis	300.0		20	9432	10/14/21 10:57	CH	XEN MID

Client Sample ID: SS04
Date Collected: 10/06/21 15:35
Date Received: 10/07/21 11:05

Lab Sample ID: 890-1378-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			8855	10/08/21 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	9114	10/10/21 21:33	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	9242	10/11/21 15:20	MR	XEN MID

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

Client Sample ID: SS04

Lab Sample ID: 890-1378-4
Matrix: Solid
Date Collected: 10/06/21 15:35
Date Received: 10/07/21 11:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	9189	10/11/21 13:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			9371	10/13/21 11:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1	9354	10/14/21 03:17	AJ	XEN MID
Soluble	Leach	DI Leach			9286	10/12/21 10:22	CH	XEN MID
Soluble	Analysis	300.0		10	9432	10/14/21 11:03	CH	XEN MID

Client Sample ID: SS05

Lab Sample ID: 890-1378-5
Matrix: Solid
Date Collected: 10/06/21 15:40
Date Received: 10/07/21 11:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			8855	10/08/21 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	9114	10/10/21 21:59	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	9242	10/11/21 15:20	MR	XEN MID
Total/NA	Analysis	8015 NM		1	9387	10/13/21 14:23	AJ	XEN MID
Total/NA	Prep	8015NM Prep			9371	10/13/21 11:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1	9354	10/14/21 03:37	AJ	XEN MID
Soluble	Leach	DI Leach			9286	10/12/21 10:22	CH	XEN MID
Soluble	Analysis	300.0		1	9432	10/14/21 11:09	CH	XEN MID

Client Sample ID: SS06

Lab Sample ID: 890-1378-6
Matrix: Solid
Date Collected: 10/06/21 15:50
Date Received: 10/07/21 11:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			8855	10/08/21 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	9114	10/10/21 22:25	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	9242	10/11/21 15:20	MR	XEN MID
Total/NA	Analysis	8015 NM		1	9387	10/13/21 14:23	AJ	XEN MID
Total/NA	Prep	8015NM Prep			9371	10/13/21 11:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1	9354	10/14/21 03:57	AJ	XEN MID
Soluble	Leach	DI Leach			9287	10/12/21 10:25	CH	XEN MID
Soluble	Analysis	300.0		5	9434	10/14/21 10:17	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: 890-1378-1
Project/Site: PLU 293 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: 890-1378-1
Project/Site: PLU 293 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 293

Job ID: 890-1378-1
SDG: 31403236.020.0129

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1378-1	SS01	Solid	10/06/21 15:02	10/07/21 11:05	0.5
890-1378-2	SS02	Solid	10/06/21 15:10	10/07/21 11:05	0.5
890-1378-3	SS03	Solid	10/06/21 15:20	10/07/21 11:05	0.5
890-1378-4	SS04	Solid	10/06/21 15:35	10/07/21 11:05	0.5
890-1378-5	SS05	Solid	10/06/21 15:40	10/07/21 11:05	0.5
890-1378-6	SS06	Solid	10/06/21 15:50	10/07/21 11:05	0.5

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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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10/14/2021

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 293	Turn Around	
Project Number:	31403236.020.0129	Routine	X
P.O. Number:		Rush:	
Sampler's Name:	Elliot Lee	Due Date:	

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

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
SS01	S	10/6/2021	15:02	0.5'	1	X	X	X	Discrete
SS02	S	10/6/2021	15:10	0.5'	1	X	X	X	Discrete
SS03	S	10/6/2021	15:20	0.5'	1	X	X	X	Discrete
SS04	S	10/6/2021	15:35	0.5'	1	X	X	X	Discrete
SS05	S	10/6/2021	15:40	0.5'	1	X	X	X	Discrete
SS06	S	10/6/2021	15:50	0.5'	1	X	X	X	Discrete

890-1378 Chain of Custody

Work Order Notes

Cost Center # 1139243001
Incident # NAPP2126045826

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

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		N.	10/7/21 11:05	2		
3				4		
5						

Revised Date 051418 Rev. 2018.1

Received by OCD: 6/27/2022 11:07:42 AM

Released to Imaging: 9/22/2022 12:11:24 PM

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1378-1
SDG Number: 31403236.020.0129

Login Number: 1378
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: 890-1378-1
SDG Number: 31403236.020.0129

Login Number: 1378
List Number: 2
Creator: Lowe, Katie

List Source: Eurofins Xenco, Midland
List Creation: 10/08/21 11:50 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").	True	

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-1527-1
Laboratory Sample Delivery Group: 31403236.020.0129
Client Project/Site: PLU 293 FLOW LINE
Revision: 1

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
1/6/2022 5:24:35 PM

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

LINKS
Review your project results through TotalAccess
Have a Question? Ask The Expert
Visit us at: www.eurofinsus.com/Env

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 293 FLOW LINE

Laboratory Job ID: 890-1527-1
SDG: 31403236.020.0129

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1527-1
Project/Site: PLU 293 FLOW LINE SDG: 31403236.020.0129

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

Job ID: 890-1527-1

Laboratory: Eurofins Xenco

Narrative

Job Narrative
890-1527-1

REVISION

The report being provided is a revision of the original report sent on 11/15/2021. The report (revision 1) is being revised due to Per client email, updated sample IDs.

Report revision history

Receipt
The samples were received on 11/3/2021 4:55 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
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-11531 and analytical batch 880-11601 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
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 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

Client Sample ID: PH01

Date Collected: 11/03/21 12:27
Date Received: 11/03/21 16:55
Sample Depth: 1

Lab Sample ID: 890-1527-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/05/21 22:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/05/21 22:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/05/21 22:42	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/05/21 11:19	11/05/21 22:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/05/21 22:42	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/05/21 11:19	11/05/21 22:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*11/05/21 11:19*	*11/05/21 22:42*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*11/05/21 11:19*	*11/05/21 22:42*	*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			11/10/21 11:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**301**		49.9		mg/Kg			11/09/21 16:19	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		11/05/21 14:12	11/05/21 22:45	1
Diesel Range Organics (Over C10-C28)	**301**		49.9		mg/Kg		11/05/21 14:12	11/05/21 22:45	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/05/21 14:12	11/05/21 22:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*11/05/21 14:12*	*11/05/21 22:45*	*1*
o-Terphenyl	*114*		*70 - 130*	*11/05/21 14:12*	*11/05/21 22:45*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**117**		5.04		mg/Kg			11/10/21 13:09	1

Client Sample ID: PH01A

Date Collected: 11/03/21 12:32
Date Received: 11/03/21 16:55
Sample Depth: 4

Lab Sample ID: 890-1527-2

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		11/05/21 11:19	11/05/21 23:02	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/05/21 11:19	11/05/21 23:02	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/05/21 11:19	11/05/21 23:02	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/05/21 11:19	11/05/21 23:02	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/05/21 11:19	11/05/21 23:02	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/05/21 11:19	11/05/21 23:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*11/05/21 11:19*	*11/05/21 23:02*	*1*

Eurofins Xenco

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

Client Sample ID: PH01A

Date Collected: 11/03/21 12:32
Date Received: 11/03/21 16:55
Sample Depth: 4

Lab Sample ID: 890-1527-2

Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*11/05/21 11:19*	*11/05/21 23:02*	*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			11/10/21 11:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**81.7**		49.9		mg/Kg			11/09/21 16:19	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		11/05/21 14:12	11/05/21 23:48	1
Diesel Range Organics (Over C10-C28)	**81.7**		49.9		mg/Kg		11/05/21 14:12	11/05/21 23:48	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/05/21 14:12	11/05/21 23:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*106*		*70 - 130*	*11/05/21 14:12*	*11/05/21 23:48*	*1*
o-Terphenyl	*118*		*70 - 130*	*11/05/21 14:12*	*11/05/21 23:48*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1760**		24.9		mg/Kg			11/10/21 13:17	5

Client Sample ID: PH02

Date Collected: 11/03/21 12:16
Date Received: 11/03/21 16:55
Sample Depth: 1

Lab Sample ID: 890-1527-3

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		11/05/21 11:19	11/05/21 23:23	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/05/21 11:19	11/05/21 23:23	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/05/21 11:19	11/05/21 23:23	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/05/21 11:19	11/05/21 23:23	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/05/21 11:19	11/05/21 23:23	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/05/21 11:19	11/05/21 23:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*11/05/21 11:19*	*11/05/21 23:23*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*11/05/21 11:19*	*11/05/21 23:23*	*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			11/10/21 11:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**2730**		50.0		mg/Kg			11/09/21 16:19	1

Eurofins Xenco

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

Client Sample ID: PH02

Date Collected: 11/03/21 12:16
Date Received: 11/03/21 16:55
Sample Depth: 1

Lab Sample ID: 890-1527-3
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		11/05/21 14:12	11/06/21 00:09	1
Diesel Range Organics (Over C10-C28)	**2450**		50.0		mg/Kg		11/05/21 14:12	11/06/21 00:09	1
Oil Range Organics (Over C28-C36)	**278**		50.0		mg/Kg		11/05/21 14:12	11/06/21 00:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*11/05/21 14:12*	*11/06/21 00:09*	*1*
o-Terphenyl	*116*		*70 - 130*	*11/05/21 14:12*	*11/06/21 00:09*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14500**		50.0		mg/Kg			11/13/21 16:21	10

Client Sample ID: PH02A

Date Collected: 11/03/21 12:21
Date Received: 11/03/21 16:55
Sample Depth: 4

Lab Sample ID: 890-1527-4
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 11:19	11/05/21 23:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/05/21 23:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/05/21 23:43	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/05/21 11:19	11/05/21 23:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/05/21 23:43	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/05/21 11:19	11/05/21 23:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*11/05/21 11:19*	*11/05/21 23:43*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*11/05/21 11:19*	*11/05/21 23:43*	*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			11/10/21 11:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**476**		50.0		mg/Kg			11/09/21 16:19	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	**476**		50.0		mg/Kg		11/05/21 14:12	11/06/21 00:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/05/21 14:12	11/06/21 00:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/05/21 14:12	11/06/21 00:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*11/05/21 14:12*	*11/06/21 00:31*	*1*
o-Terphenyl	*129*		*70 - 130*	*11/05/21 14:12*	*11/06/21 00:31*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

Client Sample ID: PH02A

Lab Sample ID: 890-1527-4
Matrix: Solid
Date Collected: 11/03/21 12:21
Date Received: 11/03/21 16:55
Sample Depth: 4

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	276		4.95		mg/Kg			11/10/21 13:33	1

Client Sample ID: PH03

Lab Sample ID: 890-1527-5
Matrix: Solid
Date Collected: 11/03/21 11:14
Date Received: 11/03/21 16:55
Sample Depth: 1

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 11:19	11/06/21 00:03	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/05/21 11:19	11/06/21 00:03	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/05/21 11:19	11/06/21 00:03	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/05/21 11:19	11/06/21 00:03	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/05/21 11:19	11/06/21 00:03	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/05/21 11:19	11/06/21 00:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*11/05/21 11:19*	*11/06/21 00:03*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*11/05/21 11:19*	*11/06/21 00:03*	*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			11/10/21 11:00	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			11/09/21 16:19	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		11/05/21 14:12	11/06/21 00:52	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		11/05/21 14:12	11/06/21 00:52	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		11/05/21 14:12	11/06/21 00:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*11/05/21 14:12*	*11/06/21 00:52*	*1*
o-Terphenyl	*130*		*70 - 130*	*11/05/21 14:12*	*11/06/21 00:52*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1070		5.01		mg/Kg			11/10/21 14:56	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

Client Sample ID: PH03A

Date Collected: 11/03/21 11:20
Date Received: 11/03/21 16:55
Sample Depth: 4

Lab Sample ID: 890-1527-6

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 11:19	11/06/21 00:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/06/21 00:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/06/21 00:24	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/05/21 11:19	11/06/21 00:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/06/21 00:24	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/05/21 11:19	11/06/21 00:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*11/05/21 11:19*	*11/06/21 00:24*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*11/05/21 11:19*	*11/06/21 00:24*	*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			11/10/21 11:00	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			11/09/21 16:19	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		11/05/21 14:12	11/06/21 01:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/05/21 14:12	11/06/21 01:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/05/21 14:12	11/06/21 01:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*11/05/21 14:12*	*11/06/21 01:13*	*1*
o-Terphenyl	*118*		*70 - 130*	*11/05/21 14:12*	*11/06/21 01:13*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**133**		4.97		mg/Kg			11/10/21 15:04	1

Client Sample ID: PH04

Date Collected: 11/03/21 11:05
Date Received: 11/03/21 16:55
Sample Depth: 3

Lab Sample ID: 890-1527-7

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 11:19	11/06/21 00:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/06/21 00:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/06/21 00:44	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/05/21 11:19	11/06/21 00:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/06/21 00:44	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/05/21 11:19	11/06/21 00:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*11/05/21 11:19*	*11/06/21 00:44*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

Client Sample ID: PH04

Date Collected: 11/03/21 11:05
Date Received: 11/03/21 16:55
Sample Depth: 3

Lab Sample ID: 890-1527-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*11/05/21 11:19*	*11/06/21 00:44*	*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			11/10/21 11:00	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			11/09/21 16:19	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		11/05/21 14:12	11/06/21 01:35	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		11/05/21 14:12	11/06/21 01:35	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		11/05/21 14:12	11/06/21 01:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*11/05/21 14:12*	*11/06/21 01:35*	*1*
o-Terphenyl	*121*		*70 - 130*	*11/05/21 14:12*	*11/06/21 01:35*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2390**		24.8	mg/Kg			11/10/21 15:11	5

Client Sample ID: PH04A

Date Collected: 11/03/21 11:06
Date Received: 11/03/21 16:55
Sample Depth: 4

Lab Sample ID: 890-1527-8
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		11/05/21 11:19	11/06/21 01:05	1
Toluene	<0.00201	U	0.00201	mg/Kg		11/05/21 11:19	11/06/21 01:05	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		11/05/21 11:19	11/06/21 01:05	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		11/05/21 11:19	11/06/21 01:05	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		11/05/21 11:19	11/06/21 01:05	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		11/05/21 11:19	11/06/21 01:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*11/05/21 11:19*	*11/06/21 01:05*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*11/05/21 11:19*	*11/06/21 01:05*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			11/10/21 11:00	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			11/09/21 16:19	1

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Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

Client Sample ID: PH04A

Date Collected: 11/03/21 11:06
Date Received: 11/03/21 16:55
Sample Depth: 4

Lab Sample ID: 890-1527-8
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		11/05/21 14:12	11/06/21 01:56	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/05/21 14:12	11/06/21 01:56	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/05/21 14:12	11/06/21 01:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*11/05/21 14:12*	*11/06/21 01:56*	*1*
o-Terphenyl	*118*		*70 - 130*	*11/05/21 14:12*	*11/06/21 01:56*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2770**		24.8		mg/Kg			11/10/21 15:19	5

Client Sample ID: PH05

Date Collected: 11/03/21 10:35
Date Received: 11/03/21 16:55
Sample Depth: 1

Lab Sample ID: 890-1527-9
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/05/21 11:19	11/06/21 01:25	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/05/21 11:19	11/06/21 01:25	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/05/21 11:19	11/06/21 01:25	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/05/21 11:19	11/06/21 01:25	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/05/21 11:19	11/06/21 01:25	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/05/21 11:19	11/06/21 01:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*11/05/21 11:19*	*11/06/21 01:25*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*11/05/21 11:19*	*11/06/21 01:25*	*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			11/10/21 11:00	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			11/09/21 16:19	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		11/05/21 14:12	11/06/21 02:18	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/05/21 14:12	11/06/21 02:18	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/05/21 14:12	11/06/21 02:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*11/05/21 14:12*	*11/06/21 02:18*	*1*
o-Terphenyl	*105*		*70 - 130*	*11/05/21 14:12*	*11/06/21 02:18*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

Client Sample ID: PH05

Date Collected: 11/03/21 10:35
Date Received: 11/03/21 16:55
Sample Depth: 1

Lab Sample ID: 890-1527-9
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	900		5.05		mg/Kg			11/10/21 15:26	1

Client Sample ID: PH05A

Date Collected: 11/03/21 10:45
Date Received: 11/03/21 16:55
Sample Depth: 4

Lab Sample ID: 890-1527-10
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 11:19	11/06/21 01:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/06/21 01:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/06/21 01:45	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		11/05/21 11:19	11/06/21 01:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/06/21 01:45	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		11/05/21 11:19	11/06/21 01:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*11/05/21 11:19*	*11/06/21 01:45*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*11/05/21 11:19*	*11/06/21 01:45*	*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			11/10/21 11:00	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			11/09/21 16:19	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		11/05/21 14:12	11/06/21 02:39	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/05/21 14:12	11/06/21 02:39	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/05/21 14:12	11/06/21 02:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*11/05/21 14:12*	*11/06/21 02:39*	*1*
o-Terphenyl	*121*		*70 - 130*	*11/05/21 14:12*	*11/06/21 02:39*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22.7		5.05		mg/Kg			11/10/21 15:34	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
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)
890-1527-1	PH01	131 S1+	107
890-1527-2	PH01A	123	113
890-1527-3	PH02	117	101
890-1527-4	PH02A	125	102
890-1527-5	PH03	123	101
890-1527-6	PH03A	114	102
890-1527-7	PH04	114	89
890-1527-8	PH04A	116	98
890-1527-9	PH05	118	97
890-1527-10	PH05A	74	70
890-1538-A-1-B MSD	Matrix Spike Duplicate	117	74
890-1538-A-1-E MS	Matrix Spike	115	106
LCS 880-11531/1-A	Lab Control Sample	108	107
LCSD 880-11531/2-A	Lab Control Sample Dup	112	106
MB 880-11531/5-A	Method Blank	123	110

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-1527-1	PH01	104	114
890-1527-1 MS	PH01	105	100
890-1527-1 MSD	PH01	116	113
890-1527-2	PH01A	106	118
890-1527-3	PH02	111	116
890-1527-4	PH02A	117	129
890-1527-5	PH03	110	130
890-1527-6	PH03A	109	118
890-1527-7	PH04	107	121
890-1527-8	PH04A	105	118
890-1527-9	PH05	96	105
890-1527-10	PH05A	107	121
LCS 880-11602/2-A	Lab Control Sample	84	93
LCSD 880-11602/3-A	Lab Control Sample Dup	82	82
MB 880-11602/1-A	Method Blank	113	128

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-11531/5-A
Matrix: Solid
Analysis Batch: 11601

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11531

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/05/21 17:21	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/05/21 17:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/05/21 17:21	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/05/21 11:19	11/05/21 17:21	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/05/21 11:19	11/05/21 17:21	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/05/21 11:19	11/05/21 17:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*11/05/21 11:19*	*11/05/21 17:21*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*11/05/21 11:19*	*11/05/21 17:21*	*1*

Lab Sample ID: LCS 880-11531/1-A
Matrix: Solid
Analysis Batch: 11601

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11531

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08524		mg/Kg		85	70 - 130		
Toluene			0.100	0.08784		mg/Kg		88	70 - 130		
Ethylbenzene			0.100	0.09086		mg/Kg		91	70 - 130		
m-Xylene & p-Xylene			0.200	0.1800		mg/Kg		90	70 - 130		
o-Xylene			0.100	0.09060		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-11531/2-A
Matrix: Solid
Analysis Batch: 11601

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11531

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09003		mg/Kg		90	70 - 130	5	35
Toluene			0.100	0.09200		mg/Kg		92	70 - 130	5	35
Ethylbenzene			0.100	0.09994		mg/Kg		100	70 - 130	10	35
m-Xylene & p-Xylene			0.200	0.1957		mg/Kg		98	70 - 130	8	35
o-Xylene			0.100	0.09561		mg/Kg		96	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 890-1538-A-1-B MSD
Matrix: Solid
Analysis Batch: 11601

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 11531

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00202	U F1	0.100	0.06575	F1	mg/Kg		65	70 - 130	12	35
Toluene	<0.00202	U F1 F2	0.100	0.05482	F1 F2	mg/Kg		55	70 - 130	36	35

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

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

Lab Sample ID: 890-1538-A-1-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 11601 — **Prep Batch: 11531**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene	<0.00202	U F1	0.100	0.06434	F1	mg/Kg		64	70 - 130	23	35
m-Xylene & p-Xylene	<0.00403	U F1	0.201	0.1183	F1	mg/Kg		58	70 - 130	29	35
o-Xylene	<0.00202	U	0.100	0.08815		mg/Kg		87	70 - 130	11	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*

Lab Sample ID: 890-1538-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 11601 — **Prep Batch: 11531**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00202	U F1	0.0996	0.07394		mg/Kg		74	70 - 130
Toluene	<0.00202	U F1 F2	0.0996	0.07907		mg/Kg		79	70 - 130
Ethylbenzene	<0.00202	U F1	0.0996	0.08129		mg/Kg		82	70 - 130
m-Xylene & p-Xylene	<0.00403	U F1	0.199	0.1578		mg/Kg		79	70 - 130
o-Xylene	<0.00202	U	0.0996	0.07868		mg/Kg		78	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

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

Lab Sample ID: MB 880-11602/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 11509 — **Prep Batch: 11602**

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		11/05/21 14:12	11/05/21 21:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/05/21 14:12	11/05/21 21:41	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/05/21 14:12	11/05/21 21:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*11/05/21 14:12*	*11/05/21 21:41*	*1*
o-Terphenyl	*128*		*70 - 130*	*11/05/21 14:12*	*11/05/21 21:41*	*1*

Lab Sample ID: LCS 880-11602/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 11509 — **Prep Batch: 11602**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1105		mg/Kg		110	70 - 130
Diesel Range Organics (Over C10-C28)			1000	978.6		mg/Kg		98	70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

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

Lab Sample ID: LCS 880-11602/2-A
Matrix: Solid
Analysis Batch: 11509

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11602

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	84		70 - 130
o-Terphenyl	93		70 - 130

Lab Sample ID: LCSD 880-11602/3-A
Matrix: Solid
Analysis Batch: 11509

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11602

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1088		mg/Kg		109	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	809.1		mg/Kg		81	70 - 130	19	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	82		70 - 130
o-Terphenyl	82		70 - 130

Lab Sample ID: 890-1527-1 MS
Matrix: Solid
Analysis Batch: 11509

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 11602

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	955.2		mg/Kg		96	70 - 130		
Diesel Range Organics (Over C10-C28)	301		997	1180		mg/Kg		88	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	100		70 - 130

Lab Sample ID: 890-1527-1 MSD
Matrix: Solid
Analysis Batch: 11509

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 11602

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	1102		mg/Kg		110	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	301		1000	1358		mg/Kg		106	70 - 130	14	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	116		70 - 130
o-Terphenyl	113		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-11669/1-A
Matrix: Solid
Analysis Batch: 11847

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			11/10/21 12:24	1

Lab Sample ID: LCS 880-11669/2-A
Matrix: Solid
Analysis Batch: 11847

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	249.5		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-11669/3-A
Matrix: Solid
Analysis Batch: 11847

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	250.1		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 890-1527-10 MS
Matrix: Solid
Analysis Batch: 11847

Client Sample ID: PH05A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	22.7		253	273.2		mg/Kg		99	90 - 110		

Lab Sample ID: 890-1527-10 MSD
Matrix: Solid
Analysis Batch: 11847

Client Sample ID: PH05A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	22.7		250	263.3		mg/Kg		96	90 - 110	4	20

Lab Sample ID: MB 880-12022/1-A
Matrix: Solid
Analysis Batch: 12169

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			11/12/21 19:29	1

Lab Sample ID: LCS 880-12022/2-A
Matrix: Solid
Analysis Batch: 12169

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 880-12022/3-A
Matrix: Solid
Analysis Batch: 12169

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	251.4		mg/Kg		101	90 - 110	3	20

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QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-8189-A-15-E MS
Matrix: Solid
Analysis Batch: 12169

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	4970		1250	6193		mg/Kg		98	90 - 110		

Lab Sample ID: 880-8189-A-15-F MSD
Matrix: Solid
Analysis Batch: 12169

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	4970		1250	6218		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

GC VOA

Prep Batch: 11531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1527-1	PH01	Total/NA	Solid	5035	
890-1527-2	PH01A	Total/NA	Solid	5035	
890-1527-3	PH02	Total/NA	Solid	5035	
890-1527-4	PH02A	Total/NA	Solid	5035	
890-1527-5	PH03	Total/NA	Solid	5035	
890-1527-6	PH03A	Total/NA	Solid	5035	
890-1527-7	PH04	Total/NA	Solid	5035	
890-1527-8	PH04A	Total/NA	Solid	5035	
890-1527-9	PH05	Total/NA	Solid	5035	
890-1527-10	PH05A	Total/NA	Solid	5035	
MB 880-11531/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11531/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11531/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1538-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
890-1538-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	

Analysis Batch: 11601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1527-1	PH01	Total/NA	Solid	8021B	11531
890-1527-2	PH01A	Total/NA	Solid	8021B	11531
890-1527-3	PH02	Total/NA	Solid	8021B	11531
890-1527-4	PH02A	Total/NA	Solid	8021B	11531
890-1527-5	PH03	Total/NA	Solid	8021B	11531
890-1527-6	PH03A	Total/NA	Solid	8021B	11531
890-1527-7	PH04	Total/NA	Solid	8021B	11531
890-1527-8	PH04A	Total/NA	Solid	8021B	11531
890-1527-9	PH05	Total/NA	Solid	8021B	11531
890-1527-10	PH05A	Total/NA	Solid	8021B	11531
MB 880-11531/5-A	Method Blank	Total/NA	Solid	8021B	11531
LCS 880-11531/1-A	Lab Control Sample	Total/NA	Solid	8021B	11531
LCSD 880-11531/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11531
890-1538-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	11531
890-1538-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	11531

Analysis Batch: 11890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1527-1	PH01	Total/NA	Solid	Total BTEX	
890-1527-2	PH01A	Total/NA	Solid	Total BTEX	
890-1527-3	PH02	Total/NA	Solid	Total BTEX	
890-1527-4	PH02A	Total/NA	Solid	Total BTEX	
890-1527-5	PH03	Total/NA	Solid	Total BTEX	
890-1527-6	PH03A	Total/NA	Solid	Total BTEX	
890-1527-7	PH04	Total/NA	Solid	Total BTEX	
890-1527-8	PH04A	Total/NA	Solid	Total BTEX	
890-1527-9	PH05	Total/NA	Solid	Total BTEX	
890-1527-10	PH05A	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

GC Semi VOA

Analysis Batch: 11509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1527-1	PH01	Total/NA	Solid	8015B NM	11602
890-1527-2	PH01A	Total/NA	Solid	8015B NM	11602
890-1527-3	PH02	Total/NA	Solid	8015B NM	11602
890-1527-4	PH02A	Total/NA	Solid	8015B NM	11602
890-1527-5	PH03	Total/NA	Solid	8015B NM	11602
890-1527-6	PH03A	Total/NA	Solid	8015B NM	11602
890-1527-7	PH04	Total/NA	Solid	8015B NM	11602
890-1527-8	PH04A	Total/NA	Solid	8015B NM	11602
890-1527-9	PH05	Total/NA	Solid	8015B NM	11602
890-1527-10	PH05A	Total/NA	Solid	8015B NM	11602
MB 880-11602/1-A	Method Blank	Total/NA	Solid	8015B NM	11602
LCS 880-11602/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	11602
LCSD 880-11602/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	11602
890-1527-1 MS	PH01	Total/NA	Solid	8015B NM	11602
890-1527-1 MSD	PH01	Total/NA	Solid	8015B NM	11602

Prep Batch: 11602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1527-1	PH01	Total/NA	Solid	8015NM Prep	
890-1527-2	PH01A	Total/NA	Solid	8015NM Prep	
890-1527-3	PH02	Total/NA	Solid	8015NM Prep	
890-1527-4	PH02A	Total/NA	Solid	8015NM Prep	
890-1527-5	PH03	Total/NA	Solid	8015NM Prep	
890-1527-6	PH03A	Total/NA	Solid	8015NM Prep	
890-1527-7	PH04	Total/NA	Solid	8015NM Prep	
890-1527-8	PH04A	Total/NA	Solid	8015NM Prep	
890-1527-9	PH05	Total/NA	Solid	8015NM Prep	
890-1527-10	PH05A	Total/NA	Solid	8015NM Prep	
MB 880-11602/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-11602/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-11602/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1527-1 MS	PH01	Total/NA	Solid	8015NM Prep	
890-1527-1 MSD	PH01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 11856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1527-1	PH01	Total/NA	Solid	8015 NM	
890-1527-2	PH01A	Total/NA	Solid	8015 NM	
890-1527-3	PH02	Total/NA	Solid	8015 NM	
890-1527-4	PH02A	Total/NA	Solid	8015 NM	
890-1527-5	PH03	Total/NA	Solid	8015 NM	
890-1527-6	PH03A	Total/NA	Solid	8015 NM	
890-1527-7	PH04	Total/NA	Solid	8015 NM	
890-1527-8	PH04A	Total/NA	Solid	8015 NM	
890-1527-9	PH05	Total/NA	Solid	8015 NM	
890-1527-10	PH05A	Total/NA	Solid	8015 NM	

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

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Leach Batch: 11669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1527-1	PH01	Soluble	Solid	DI Leach	
890-1527-2	PH01A	Soluble	Solid	DI Leach	
890-1527-4	PH02A	Soluble	Solid	DI Leach	
890-1527-5	PH03	Soluble	Solid	DI Leach	
890-1527-6	PH03A	Soluble	Solid	DI Leach	
890-1527-7	PH04	Soluble	Solid	DI Leach	
890-1527-8	PH04A	Soluble	Solid	DI Leach	
890-1527-9	PH05	Soluble	Solid	DI Leach	
890-1527-10	PH05A	Soluble	Solid	DI Leach	
MB 880-11669/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11669/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11669/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1527-10 MS	PH05A	Soluble	Solid	DI Leach	
890-1527-10 MSD	PH05A	Soluble	Solid	DI Leach	

Analysis Batch: 11847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1527-1	PH01	Soluble	Solid	300.0	11669
890-1527-2	PH01A	Soluble	Solid	300.0	11669
890-1527-4	PH02A	Soluble	Solid	300.0	11669
890-1527-5	PH03	Soluble	Solid	300.0	11669
890-1527-6	PH03A	Soluble	Solid	300.0	11669
890-1527-7	PH04	Soluble	Solid	300.0	11669
890-1527-8	PH04A	Soluble	Solid	300.0	11669
890-1527-9	PH05	Soluble	Solid	300.0	11669
890-1527-10	PH05A	Soluble	Solid	300.0	11669
MB 880-11669/1-A	Method Blank	Soluble	Solid	300.0	11669
LCS 880-11669/2-A	Lab Control Sample	Soluble	Solid	300.0	11669
LCSD 880-11669/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11669
890-1527-10 MS	PH05A	Soluble	Solid	300.0	11669
890-1527-10 MSD	PH05A	Soluble	Solid	300.0	11669

Leach Batch: 12022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1527-3	PH02	Soluble	Solid	DI Leach	
MB 880-12022/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-12022/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-12022/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-8189-A-15-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-8189-A-15-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 12169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1527-3	PH02	Soluble	Solid	300.0	12022
MB 880-12022/1-A	Method Blank	Soluble	Solid	300.0	12022
LCS 880-12022/2-A	Lab Control Sample	Soluble	Solid	300.0	12022
LCSD 880-12022/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	12022
880-8189-A-15-E MS	Matrix Spike	Soluble	Solid	300.0	12022
880-8189-A-15-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	12022

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

Client Sample ID: PH01
Date Collected: 11/03/21 12:27
Date Received: 11/03/21 16:55

Lab Sample ID: 890-1527-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11531	11/05/21 11:19	MR	XEN MID
Total/NA	Analysis	8021B		1	11601	11/05/21 22:42	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	11890	11/10/21 11:00	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11602	11/05/21 14:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11509	11/05/21 22:45	AJ	XEN MID
Soluble	Leach	DI Leach			11669	11/08/21 11:25	CH	XEN MID
Soluble	Analysis	300.0		1	11847	11/10/21 13:09	CH	XEN MID

Client Sample ID: PH01A
Date Collected: 11/03/21 12:32
Date Received: 11/03/21 16:55

Lab Sample ID: 890-1527-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11531	11/05/21 11:19	MR	XEN MID
Total/NA	Analysis	8021B		1	11601	11/05/21 23:02	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	11890	11/10/21 11:00	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11602	11/05/21 14:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11509	11/05/21 23:48	AJ	XEN MID
Soluble	Leach	DI Leach			11669	11/08/21 11:25	CH	XEN MID
Soluble	Analysis	300.0		5	11847	11/10/21 13:17	CH	XEN MID

Client Sample ID: PH02
Date Collected: 11/03/21 12:16
Date Received: 11/03/21 16:55

Lab Sample ID: 890-1527-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11531	11/05/21 11:19	MR	XEN MID
Total/NA	Analysis	8021B		1	11601	11/05/21 23:23	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	11890	11/10/21 11:00	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11602	11/05/21 14:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11509	11/06/21 00:09	AJ	XEN MID
Soluble	Leach	DI Leach			12022	11/11/21 12:56	CH	XEN MID
Soluble	Analysis	300.0		10	12169	11/13/21 16:21	CH	XEN MID

Client Sample ID: PH02A
Date Collected: 11/03/21 12:21
Date Received: 11/03/21 16:55

Lab Sample ID: 890-1527-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11531	11/05/21 11:19	MR	XEN MID
Total/NA	Analysis	8021B		1	11601	11/05/21 23:43	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	11890	11/10/21 11:00	AJ	XEN MID

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

Client Sample ID: PH02A
Date Collected: 11/03/21 12:21
Date Received: 11/03/21 16:55

Lab Sample ID: 890-1527-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11602	11/05/21 14:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11509	11/06/21 00:31	AJ	XEN MID
Soluble	Leach	DI Leach			11669	11/08/21 11:25	CH	XEN MID
Soluble	Analysis	300.0		1	11847	11/10/21 13:33	CH	XEN MID

Client Sample ID: PH03
Date Collected: 11/03/21 11:14
Date Received: 11/03/21 16:55

Lab Sample ID: 890-1527-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11531	11/05/21 11:19	MR	XEN MID
Total/NA	Analysis	8021B		1	11601	11/06/21 00:03	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	11890	11/10/21 11:00	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11602	11/05/21 14:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11509	11/06/21 00:52	AJ	XEN MID
Soluble	Leach	DI Leach			11669	11/08/21 11:25	CH	XEN MID
Soluble	Analysis	300.0		1	11847	11/10/21 14:56	CH	XEN MID

Client Sample ID: PH03A
Date Collected: 11/03/21 11:20
Date Received: 11/03/21 16:55

Lab Sample ID: 890-1527-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11531	11/05/21 11:19	MR	XEN MID
Total/NA	Analysis	8021B		1	11601	11/06/21 00:24	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	11890	11/10/21 11:00	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11602	11/05/21 14:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11509	11/06/21 01:13	AJ	XEN MID
Soluble	Leach	DI Leach			11669	11/08/21 11:25	CH	XEN MID
Soluble	Analysis	300.0		1	11847	11/10/21 15:04	CH	XEN MID

Client Sample ID: PH04
Date Collected: 11/03/21 11:05
Date Received: 11/03/21 16:55

Lab Sample ID: 890-1527-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11531	11/05/21 11:19	MR	XEN MID
Total/NA	Analysis	8021B		1	11601	11/06/21 00:44	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	11890	11/10/21 11:00	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11602	11/05/21 14:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11509	11/06/21 01:35	AJ	XEN MID

Eurofins Xenco

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

Client Sample ID: PH04
Date Collected: 11/03/21 11:05
Date Received: 11/03/21 16:55

Lab Sample ID: 890-1527-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			11669	11/08/21 11:25	CH	XEN MID
Soluble	Analysis	300.0		5	11847	11/10/21 15:11	CH	XEN MID

Client Sample ID: PH04A
Date Collected: 11/03/21 11:06
Date Received: 11/03/21 16:55

Lab Sample ID: 890-1527-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11531	11/05/21 11:19	MR	XEN MID
Total/NA	Analysis	8021B		1	11601	11/06/21 01:05	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	11890	11/10/21 11:00	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11602	11/05/21 14:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11509	11/06/21 01:56	AJ	XEN MID
Soluble	Leach	DI Leach			11669	11/08/21 11:25	CH	XEN MID
Soluble	Analysis	300.0		5	11847	11/10/21 15:19	CH	XEN MID

Client Sample ID: PH05
Date Collected: 11/03/21 10:35
Date Received: 11/03/21 16:55

Lab Sample ID: 890-1527-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11531	11/05/21 11:19	MR	XEN MID
Total/NA	Analysis	8021B		1	11601	11/06/21 01:25	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	11890	11/10/21 11:00	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11602	11/05/21 14:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11509	11/06/21 02:18	AJ	XEN MID
Soluble	Leach	DI Leach			11669	11/08/21 11:25	CH	XEN MID
Soluble	Analysis	300.0		1	11847	11/10/21 15:26	CH	XEN MID

Client Sample ID: PH05A
Date Collected: 11/03/21 10:45
Date Received: 11/03/21 16:55

Lab Sample ID: 890-1527-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11531	11/05/21 11:19	MR	XEN MID
Total/NA	Analysis	8021B		1	11601	11/06/21 01:45	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	11890	11/10/21 11:00	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11602	11/05/21 14:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11509	11/06/21 02:39	AJ	XEN MID
Soluble	Leach	DI Leach			11669	11/08/21 11:25	CH	XEN MID
Soluble	Analysis	300.0		1	11847	11/10/21 15:34	CH	XEN MID

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-1527-1
Project/Site: PLU 293 FLOW LINE SDG: 31403236.020.0129

Laboratory: Eurofins Xenco

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 293 FLOW LINE

Job ID: 890-1527-1
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, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1527-1
SDG: 31403236.020.0129

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1527-1	PH01	Solid	11/03/21 12:27	11/03/21 16:55	1
890-1527-2	PH01A	Solid	11/03/21 12:32	11/03/21 16:55	4
890-1527-3	PH02	Solid	11/03/21 12:16	11/03/21 16:55	1
890-1527-4	PH02A	Solid	11/03/21 12:21	11/03/21 16:55	4
890-1527-5	PH03	Solid	11/03/21 11:14	11/03/21 16:55	1
890-1527-6	PH03A	Solid	11/03/21 11:20	11/03/21 16:55	4
890-1527-7	PH04	Solid	11/03/21 11:05	11/03/21 16:55	3
890-1527-8	PH04A	Solid	11/03/21 11:06	11/03/21 16:55	4
890-1527-9	PH05	Solid	11/03/21 10:35	11/03/21 16:55	1
890-1527-10	PH05A	Solid	11/03/21 10:45	11/03/21 16:55	4

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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 293 Flow Line	Turn Around	
Project Number:	31403236.020.0129	Routine X	
P.O. Number:		Rush: .	
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		
Received Intact:	(Yes) No	TNM007		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

ANALYSIS REQUEST

890-1527 Chain of Custody

Work Order Notes

IN:NAPP2126045826
CC:1139243001
API:30-015-34877

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
PH01	S	11/3/2021	12:27	1	1	x	x	x	Composite
PH01	S	11/3/2021	12:32	4	1	x	x	x	Composite
PH02	S	11/3/2021	12:16	1	1	x	x	x	Composite
PH02	S	11/3/2021	12:21	4	1	x	x	x	Composite
PH03	S	11/3/2021	11:14	1	1	x	x	x	Composite
PH03	S	11/3/2021	11:20	4	1	x	x	x	Composite
PH04	S	11/3/2021	11:05	3	1	x	x	x	Composite
PH04	S	11/3/2021	11:06	4	1	x	x	x	Composite
PH05	S	11/3/2021	10:35	1	1	x	x	x	Composite
PH05	S	11/3/2021	10:45	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			11.3.21 1655	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018 1

Received by OCD: 6/27/2022 11:07:42 AM
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1/6/2022 (Rev. 1)
Released to Imaging: 9/22/2022 12:11:24 PM

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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: 890-495 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 #: 890-1527-1
Address: 1211 W Florida Ave,	Due Date Requested: 11/9/2021			
City: Midland	TAT Requested (days):			
State Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #			
Project Name: PLU 293 FLOW LINE	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:										
PH01 (890-1527-1)	11/3/21	12 27 Mountain		Solid			X	X	X	X	X	1	
PH01 (890-1527-2)	11/3/21	12 32 Mountain		Solid			X	X	X	X	X	1	
PH02 (890-1527-3)	11/3/21	12 16 Mountain		Solid			X	X	X	X	X	1	
PH02 (890-1527-4)	11/3/21	12 21 Mountain		Solid			X	X	X	X	X	1	
PH03 (890-1527-5)	11/3/21	11 14 Mountain		Solid			X	X	X	X	X	1	
PH03 (890-1527-6)	11/3/21	11 20 Mountain		Solid			X	X	X	X	X	1	
PH04 (890-1527-7)	11/3/21	11 05 Mountain		Solid			X	X	X	X	X	1	
PH04 (890-1527-8)	11/3/21	11 06 Mountain		Solid			X	X	X	X	X	1	
PH05 (890-1527-9)	11/3/21	10 35 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: 11-4-20	Company	Received by:	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. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 4 6/4.7

Ver: 06/08/2021

Received by OCD: 6/27/2022 11:07:42 AM

Released to Imaging: 9/22/2022 12:11:24 PM

1/6/2022 (Rev. 1)

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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

1/6/2022 (Rev. 1)

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-495 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 #: 890-1527-1
Address: 1211 W Florida Ave,	Due Date Requested: 11/9/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: PLU 293 FLOW LINE	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:										
PH05 (890-1527-10)	11/3/21	10 45 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: 11.4.21	Date/Time	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company

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

Ver: 06/08/2021

Received by OCD: 6/27/2022 11:07:42 AM

Released to Imaging: 9/22/2022 12:11:24 PM

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1527-1
SDG Number: 31403236.020.0129

Login Number: 1527
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco

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: 890-1527-1
SDG Number: 31403236.020.0129

Login Number: 1527
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Xenco
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: 890-1542-1
Laboratory Sample Delivery Group: 31403236.020.0129
Client Project/Site: PLU 293 FLOW LINE

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
11/12/2021 9:27:59 AM

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

LINKS
Review your project results through TotalAccess
Have a Question? Ask The Expert
Visit us at: www.eurofinsus.com/Env

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 293 FLOW LINE

Laboratory Job ID: 890-1542-1
SDG: 31403236.020.0129

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1542-1
Project/Site: PLU 293 FLOW LINE 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
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. Job ID: 890-1542-1
Project/Site: PLU 293 FLOW LINE SDG: 31403236.020.0129

Job ID: 890-1542-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1542-1

Receipt
The samples were received on 11/5/2021 2:57 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (MB 880-11848/1-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
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 293 FLOW LINE

Job ID: 890-1542-1
SDG: 31403236.020.0129

Client Sample ID: SW01

Lab Sample ID: 890-1542-1
Matrix: Solid
Date Collected: 11/04/21 11:34
Date Received: 11/05/21 14:57
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		11/09/21 08:29	11/09/21 17:35	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/09/21 08:29	11/09/21 17:35	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/09/21 08:29	11/09/21 17:35	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/09/21 08:29	11/09/21 17:35	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/09/21 08:29	11/09/21 17:35	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/09/21 08:29	11/09/21 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*11/09/21 08:29*	*11/09/21 17:35*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*11/09/21 08:29*	*11/09/21 17:35*	*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		11/09/21 15:18	11/10/21 00:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/09/21 15:18	11/10/21 00:21	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/09/21 15:18	11/10/21 00:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*11/09/21 15:18*	*11/10/21 00:21*	*1*
o-Terphenyl	*113*		*70 - 130*	*11/09/21 15:18*	*11/10/21 00:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**70.1**		4.97		mg/Kg			11/11/21 21:45	1

Client Sample ID: SW02

Lab Sample ID: 890-1542-2
Matrix: Solid
Date Collected: 11/04/21 13:03
Date Received: 11/05/21 14:57
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		11/09/21 08:29	11/09/21 17:55	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/09/21 08:29	11/09/21 17:55	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/09/21 08:29	11/09/21 17:55	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/09/21 08:29	11/09/21 17:55	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/09/21 08:29	11/09/21 17:55	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/09/21 08:29	11/09/21 17:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*11/09/21 08:29*	*11/09/21 17:55*	*1*

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Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1542-1
SDG: 31403236.020.0129

Client Sample ID: SW02

Lab Sample ID: 890-1542-2
Matrix: Solid
Date Collected: 11/04/21 13:03
Date Received: 11/05/21 14:57
Sample Depth: 0 - 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*11/09/21 08:29*	*11/09/21 17:55*	*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 14:02	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		11/09/21 15:18	11/10/21 00:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/09/21 15:18	11/10/21 00:42	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/09/21 15:18	11/10/21 00:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*115*		*70 - 130*	*11/09/21 15:18*	*11/10/21 00:42*	*1*
o-Terphenyl	*119*		*70 - 130*	*11/09/21 15:18*	*11/10/21 00:42*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**40.1**		5.00		mg/Kg			11/11/21 21:52	1

Client Sample ID: SW03

Lab Sample ID: 890-1542-3
Matrix: Solid
Date Collected: 11/04/21 13:05
Date Received: 11/05/21 14:57
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		11/09/21 08:29	11/09/21 18:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/09/21 08:29	11/09/21 18:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/09/21 08:29	11/09/21 18:16	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/09/21 08:29	11/09/21 18:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/09/21 08:29	11/09/21 18:16	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/09/21 08:29	11/09/21 18:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*11/09/21 08:29*	*11/09/21 18:16*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*11/09/21 08:29*	*11/09/21 18:16*	*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	<49.9	U	49.9		mg/Kg			11/11/21 15:00	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1542-1
SDG: 31403236.020.0129

Client Sample ID: SW03

Lab Sample ID: 890-1542-3
Matrix: Solid
Date Collected: 11/04/21 13:05
Date Received: 11/05/21 14:57
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	<49.9	U	49.9		mg/Kg		11/09/21 15:18	11/10/21 01:05	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/09/21 15:18	11/10/21 01:05	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/09/21 15:18	11/10/21 01:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*11/09/21 15:18*	*11/10/21 01:05*	*1*
o-Terphenyl	*114*		*70 - 130*	*11/09/21 15:18*	*11/10/21 01:05*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**57.9**		5.04		mg/Kg			11/11/21 21:59	1

Client Sample ID: SW04

Lab Sample ID: 890-1542-4
Matrix: Solid
Date Collected: 11/04/21 14:38
Date Received: 11/05/21 14:57
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		11/09/21 08:29	11/09/21 18:36	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/09/21 08:29	11/09/21 18:36	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/09/21 08:29	11/09/21 18:36	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/09/21 08:29	11/09/21 18:36	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/09/21 08:29	11/09/21 18:36	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/09/21 08:29	11/09/21 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*11/09/21 08:29*	*11/09/21 18:36*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*11/09/21 08:29*	*11/09/21 18:36*	*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			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		11/09/21 15:18	11/10/21 01:27	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/09/21 15:18	11/10/21 01:27	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/09/21 15:18	11/10/21 01:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*11/09/21 15:18*	*11/10/21 01:27*	*1*
o-Terphenyl	*111*		*70 - 130*	*11/09/21 15:18*	*11/10/21 01:27*	*1*

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Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1542-1
SDG: 31403236.020.0129

Client Sample ID: SW04
Date Collected: 11/04/21 14:38
Date Received: 11/05/21 14:57
Sample Depth: 0 - 4

Lab Sample ID: 890-1542-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	53.6		4.98		mg/Kg			11/11/21 22:21	1

Surrogate Summary

Client: WSP USA Inc. Job ID: 890-1542-1
Project/Site: PLU 293 FLOW LINE 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)										
880-8083-A-3-B MS	Matrix Spike	126	106										
880-8083-A-3-C MSD	Matrix Spike Duplicate	122	103										
890-1542-1	SW01	118	103										
890-1542-2	SW02	89	72										
890-1542-3	SW03	115	95										
890-1542-4	SW04	119	101										
LCS 880-11794/1-A	Lab Control Sample	113	102										
LCSD 880-11794/2-A	Lab Control Sample Dup	116	101										
MB 880-11794/5-A	Method Blank	119	106										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-1542-1	SW01	107	113										
890-1542-2	SW02	115	119										
890-1542-3	SW03	106	114										
890-1542-4	SW04	107	111										
890-1544-A-1-F MS	Matrix Spike	107	103										
890-1544-A-1-G MSD	Matrix Spike Duplicate	107	104										
LCS 880-11848/2-A	Lab Control Sample	119	128										
LCSD 880-11848/3-A	Lab Control Sample Dup	119	122										
MB 880-11848/1-A	Method Blank	121	134 S1+										

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1542-1
SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-11794/5-A
Matrix: Solid
Analysis Batch: 11793

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11794

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/09/21 08:29	11/09/21 11:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/09/21 08:29	11/09/21 11:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/09/21 08:29	11/09/21 11:26	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/09/21 08:29	11/09/21 11:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/09/21 08:29	11/09/21 11:26	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/09/21 08:29	11/09/21 11:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*11/09/21 08:29*	*11/09/21 11:26*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*11/09/21 08:29*	*11/09/21 11:26*	*1*

Lab Sample ID: LCS 880-11794/1-A
Matrix: Solid
Analysis Batch: 11793

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11794

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09176		mg/Kg		92	70 - 130		
Toluene			0.100	0.09873		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.09888		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.2005		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.09827		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-11794/2-A
Matrix: Solid
Analysis Batch: 11793

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11794

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09636		mg/Kg		96	70 - 130	5	35
Toluene			0.100	0.1045		mg/Kg		104	70 - 130	6	35
Ethylbenzene			0.100	0.1099		mg/Kg		110	70 - 130	11	35
m-Xylene & p-Xylene			0.200	0.2151		mg/Kg		108	70 - 130	7	35
o-Xylene			0.100	0.1103		mg/Kg		110	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 880-8083-A-3-B MS
Matrix: Solid
Analysis Batch: 11793

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 11794

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00201	U	0.0998	0.08330		mg/Kg		83	70 - 130		
Toluene	<0.00201	U	0.0998	0.08994		mg/Kg		88	70 - 130		

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QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1542-1
SDG: 31403236.020.0129

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

Lab Sample ID: 880-8083-A-3-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 11793 — **Prep Batch: 11794**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00201	U	0.0998	0.09268		mg/Kg		93	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1837		mg/Kg		90	70 - 130
o-Xylene	<0.00201	U	0.0998	0.09012		mg/Kg		89	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 880-8083-A-3-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 11793 — **Prep Batch: 11794**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0996	0.08526		mg/Kg		85	70 - 130	2	35
Toluene	<0.00201	U	0.0996	0.08894		mg/Kg		88	70 - 130	1	35
Ethylbenzene	<0.00201	U	0.0996	0.09281		mg/Kg		93	70 - 130	0	35
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1748		mg/Kg		86	70 - 130	5	35
o-Xylene	<0.00201	U	0.0996	0.08654		mg/Kg		85	70 - 130	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

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

Lab Sample ID: MB 880-11848/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 11800 — **Prep Batch: 11848**

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		11/09/21 15:18	11/09/21 20:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/09/21 15:18	11/09/21 20:36	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/09/21 15:18	11/09/21 20:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*11/09/21 15:18*	*11/09/21 20:36*	*1*
o-Terphenyl	*134*	*S1+*	*70 - 130*	*11/09/21 15:18*	*11/09/21 20:36*	*1*

Lab Sample ID: LCS 880-11848/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 11800 — **Prep Batch: 11848**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10			1000	986.0		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1288		mg/Kg		129	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1542-1
SDG: 31403236.020.0129

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

Lab Sample ID: LCS 880-11848/2-A
Matrix: Solid
Analysis Batch: 11800

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11848

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	119		70 - 130
o-Terphenyl	128		70 - 130

Lab Sample ID: LCSD 880-11848/3-A
Matrix: Solid
Analysis Batch: 11800

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11848

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	992.3		mg/Kg		99	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1104		mg/Kg		110	70 - 130	15	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	119		70 - 130
o-Terphenyl	122		70 - 130

Lab Sample ID: 890-1544-A-1-F MS
Matrix: Solid
Analysis Batch: 11800

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 11848

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	1145		mg/Kg		115	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1151		mg/Kg		115	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: 890-1544-A-1-G MSD
Matrix: Solid
Analysis Batch: 11800

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 11848

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	1198		mg/Kg		120	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	1163		mg/Kg		116	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	104		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1542-1
SDG: 31403236.020.0129

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-11675/1-A
Matrix: Solid
Analysis Batch: 12053

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 19:54	1

Lab Sample ID: LCS 880-11675/2-A
Matrix: Solid
Analysis Batch: 12053

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	249.2		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-11675/3-A
Matrix: Solid
Analysis Batch: 12053

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	248.0		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 890-1542-3 MS
Matrix: Solid
Analysis Batch: 12053

Client Sample ID: SW03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	57.9		252	313.9		mg/Kg		102	90 - 110		

Lab Sample ID: 890-1542-3 MSD
Matrix: Solid
Analysis Batch: 12053

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	57.9		252	311.7		mg/Kg		101	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1542-1
Project/Site: PLU 293 FLOW LINE SDG: 31403236.020.0129

GC VOA

Analysis Batch: 11793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1542-1	SW01	Total/NA	Solid	8021B	11794
890-1542-2	SW02	Total/NA	Solid	8021B	11794
890-1542-3	SW03	Total/NA	Solid	8021B	11794
890-1542-4	SW04	Total/NA	Solid	8021B	11794
MB 880-11794/5-A	Method Blank	Total/NA	Solid	8021B	11794
LCS 880-11794/1-A	Lab Control Sample	Total/NA	Solid	8021B	11794
LCSD 880-11794/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11794
880-8083-A-3-B MS	Matrix Spike	Total/NA	Solid	8021B	11794
880-8083-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	11794

Prep Batch: 11794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1542-1	SW01	Total/NA	Solid	5035	
890-1542-2	SW02	Total/NA	Solid	5035	
890-1542-3	SW03	Total/NA	Solid	5035	
890-1542-4	SW04	Total/NA	Solid	5035	
MB 880-11794/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11794/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11794/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-8083-A-3-B MS	Matrix Spike	Total/NA	Solid	5035	
880-8083-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 12040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1542-1	SW01	Total/NA	Solid	Total BTEX	
890-1542-2	SW02	Total/NA	Solid	Total BTEX	
890-1542-3	SW03	Total/NA	Solid	Total BTEX	
890-1542-4	SW04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 11800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1542-1	SW01	Total/NA	Solid	8015B NM	11848
890-1542-2	SW02	Total/NA	Solid	8015B NM	11848
890-1542-3	SW03	Total/NA	Solid	8015B NM	11848
890-1542-4	SW04	Total/NA	Solid	8015B NM	11848
MB 880-11848/1-A	Method Blank	Total/NA	Solid	8015B NM	11848
LCS 880-11848/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	11848
LCSD 880-11848/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	11848
890-1544-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	11848
890-1544-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	11848

Prep Batch: 11848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1542-1	SW01	Total/NA	Solid	8015NM Prep	
890-1542-2	SW02	Total/NA	Solid	8015NM Prep	
890-1542-3	SW03	Total/NA	Solid	8015NM Prep	
890-1542-4	SW04	Total/NA	Solid	8015NM Prep	
MB 880-11848/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-11848/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1542-1
Project/Site: PLU 293 FLOW LINE SDG: 31403236.020.0129

GC Semi VOA (Continued)

Prep Batch: 11848 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-11848/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1544-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1544-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 12045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1542-1	SW01	Total/NA	Solid	8015 NM	
890-1542-2	SW02	Total/NA	Solid	8015 NM	
890-1542-3	SW03	Total/NA	Solid	8015 NM	
890-1542-4	SW04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 11675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1542-1	SW01	Soluble	Solid	DI Leach	
890-1542-2	SW02	Soluble	Solid	DI Leach	
890-1542-3	SW03	Soluble	Solid	DI Leach	
890-1542-4	SW04	Soluble	Solid	DI Leach	
MB 880-11675/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11675/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11675/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1542-3 MS	SW03	Soluble	Solid	DI Leach	
890-1542-3 MSD	SW03	Soluble	Solid	DI Leach	

Analysis Batch: 12053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1542-1	SW01	Soluble	Solid	300.0	11675
890-1542-2	SW02	Soluble	Solid	300.0	11675
890-1542-3	SW03	Soluble	Solid	300.0	11675
890-1542-4	SW04	Soluble	Solid	300.0	11675
MB 880-11675/1-A	Method Blank	Soluble	Solid	300.0	11675
LCS 880-11675/2-A	Lab Control Sample	Soluble	Solid	300.0	11675
LCSD 880-11675/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11675
890-1542-3 MS	SW03	Soluble	Solid	300.0	11675
890-1542-3 MSD	SW03	Soluble	Solid	300.0	11675

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1542-1
Project/Site: PLU 293 FLOW LINE SDG: 31403236.020.0129

Client Sample ID: SW01 Lab Sample ID: 890-1542-1

Date Collected: 11/04/21 11:34 **Matrix: Solid**
Date Received: 11/05/21 14:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11794	11/09/21 08:29	MR	XEN MID
Total/NA	Analysis	8021B		1	11793	11/09/21 17:35	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			11848	11/09/21 15:18	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11800	11/10/21 00:21	AJ	XEN MID
Soluble	Leach	DI Leach			11675	11/08/21 11:42	CH	XEN MID
Soluble	Analysis	300.0		1	12053	11/11/21 21:45	CH	XEN MID

Client Sample ID: SW02 Lab Sample ID: 890-1542-2

Date Collected: 11/04/21 13:03 **Matrix: Solid**
Date Received: 11/05/21 14:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11794	11/09/21 08:29	MR	XEN MID
Total/NA	Analysis	8021B		1	11793	11/09/21 17:55	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			11848	11/09/21 15:18	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11800	11/10/21 00:42	AJ	XEN MID
Soluble	Leach	DI Leach			11675	11/08/21 11:42	CH	XEN MID
Soluble	Analysis	300.0		1	12053	11/11/21 21:52	CH	XEN MID

Client Sample ID: SW03 Lab Sample ID: 890-1542-3

Date Collected: 11/04/21 13:05 **Matrix: Solid**
Date Received: 11/05/21 14:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11794	11/09/21 08:29	MR	XEN MID
Total/NA	Analysis	8021B		1	11793	11/09/21 18:16	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			11848	11/09/21 15:18	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11800	11/10/21 01:05	AJ	XEN MID
Soluble	Leach	DI Leach			11675	11/08/21 11:42	CH	XEN MID
Soluble	Analysis	300.0		1	12053	11/11/21 21:59	CH	XEN MID

Client Sample ID: SW04 Lab Sample ID: 890-1542-4

Date Collected: 11/04/21 14:38 **Matrix: Solid**
Date Received: 11/05/21 14:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11794	11/09/21 08:29	MR	XEN MID
Total/NA	Analysis	8021B		1	11793	11/09/21 18:36	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	12040	11/11/21 14:02	AJ	XEN MID

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1542-1
SDG: 31403236.020.0129

Client Sample ID: SW04
Date Collected: 11/04/21 14:38
Date Received: 11/05/21 14:57

Lab Sample ID: 890-1542-4
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			11848	11/09/21 15:18	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11800	11/10/21 01:27	AJ	XEN MID
Soluble	Leach	DI Leach			11675	11/08/21 11:42	CH	XEN MID
Soluble	Analysis	300.0		1	12053	11/11/21 22:21	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: 890-1542-1
Project/Site: PLU 293 FLOW LINE 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.
Project/Site: PLU 293 FLOW LINE

Job ID: 890-1542-1
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 293 FLOW LINE

Job ID: 890-1542-1
SDG: 31403236.020.0129

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1542-1	SW01	Solid	11/04/21 11:34	11/05/21 14:57	0 - 4
890-1542-2	SW02	Solid	11/04/21 13:03	11/05/21 14:57	0 - 4
890-1542-3	SW03	Solid	11/04/21 13:05	11/05/21 14:57	0 - 4
890-1542-4	SW04	Solid	11/04/21 14:38	11/05/21 14:57	0 - 4

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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 ☐ RP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 293 Flow Line	Turn Around	
Project Number:	31403236.020.0129	Routine	X
P.O. Number:		Rush:	.
Sampler's Name:	Travis Casey	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.4/1.2	Thermometer ID	TRM007
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

890-1542 Chain of Custody

Work Order Notes

IN:NAPP2126045826
CC:1139243001
API:30-015-34877

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
SW01	S	11/4/2021	11:34	0-4	1	x	x	x	Composite
SW02	S	11/4/2021	13:03	0-4	1	x	x	x	Composite
SW03	S	11/4/2021	13:05	0-4	1	x	x	x	Composite
SW04	S	11/4/2021	14:38	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	Anna Byers	11/5/21 1423	2 Anna Byers		11.5.21 1457
3			4		
5			6		

Revised Date 051418 Rev 2018 1

Received by OCD: 6/27/2022 11:07:42 AM

Released to Imaging: 9/22/2022 12:11:24 PM

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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

11/12/2021

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-498 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 #: 890-1542-1
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 293 FLOW LINE	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:										
SW01 (890-1542-1)	11/4/21	11 34 Mountain		Solid			X	X	X	X	X	1	
SW02 (890-1542-2)	11/4/21	13 03 Mountain		Solid			X	X	X	X	X	1	
SW03 (890-1542-3)	11/4/21	13 05 Mountain		Solid			X	X	X	X	X	1	
SW04 (890-1542-4)	11/4/21	14 38 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: 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: Cloe Cuffo 11-8-21	Date/Time	Company	Received by: Kramer	Date/Time: 11 9 21	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 1110	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. 4.2/4.3

Ver 06/08/2021

Page 22 of 24

Received by OCD: 6/27/2022 11:07:42 AM

Released to Imaging: 9/22/2022 12:11:24 PM

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1542-1
SDG Number: 31403236.020.0129

Login Number: 1542
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: 890-1542-1
SDG Number: 31403236.020.0129

Login Number: 1542
List Number: 2
Creator: Lowe, Katie

List Source: Eurofins Xenco, Midland
List Creation: 11/09/21 11:15 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").	True	

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-1545-1
Laboratory Sample Delivery Group: 31403236.020.0129
Client Project/Site: PLU 293 Flowline

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

Attn: Kalei Jennings

JKramer

Authorized for release by:
11/18/2021 7:22:40 PM

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

LINKS
Review your project results through TotalAccess
Have a Question? Ask The Expert
Visit us at: www.eurofinsus.com/Env

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 293 Flowline

Laboratory Job ID: 890-1545-1
SDG: 31403236.020.0129

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1545-1
Project/Site: PLU 293 Flowline 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
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. Job ID: 890-1545-1
Project/Site: PLU 293 Flowline SDG: 31403236.020.0129

Job ID: 890-1545-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1545-1

Receipt
The samples were received on 11/8/2021 1:26 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (MB 880-11848/1-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 880-11956 and analytical batch 880-12586 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 293 Flowline

Job ID: 890-1545-1
SDG: 31403236.020.0129

Client Sample ID: SW05

Lab Sample ID: 890-1545-1
Matrix: Solid
Date Collected: 11/05/21 15:14
Date Received: 11/08/21 13:26
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		11/09/21 08:29	11/09/21 18:57	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/09/21 08:29	11/09/21 18:57	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/09/21 08:29	11/09/21 18:57	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/09/21 08:29	11/09/21 18:57	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/09/21 08:29	11/09/21 18:57	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/09/21 08:29	11/09/21 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*11/09/21 08:29*	*11/09/21 18:57*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*11/09/21 08:29*	*11/09/21 18:57*	*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			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 15:24	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		11/09/21 15:18	11/10/21 02:35	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		11/09/21 15:18	11/10/21 02:35	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		11/09/21 15:18	11/10/21 02:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*11/09/21 15:18*	*11/10/21 02:35*	*1*
o-Terphenyl	*120*		*70 - 130*	*11/09/21 15:18*	*11/10/21 02:35*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**86.0**		4.98		mg/Kg			11/18/21 16:29	1

Client Sample ID: SW08

Lab Sample ID: 890-1545-2
Matrix: Solid
Date Collected: 11/05/21 14:45
Date Received: 11/08/21 13:26
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		11/09/21 08:29	11/09/21 19:17	1
Toluene	<0.00198	U	0.00198		mg/Kg		11/09/21 08:29	11/09/21 19:17	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		11/09/21 08:29	11/09/21 19:17	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		11/09/21 08:29	11/09/21 19:17	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		11/09/21 08:29	11/09/21 19:17	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		11/09/21 08:29	11/09/21 19:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*11/09/21 08:29*	*11/09/21 19:17*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flowline

Job ID: 890-1545-1
SDG: 31403236.020.0129

Client Sample ID: SW08

Date Collected: 11/05/21 14:45
Date Received: 11/08/21 13:26
Sample Depth: 0 - 4

Lab Sample ID: 890-1545-2

Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*11/09/21 08:29*	*11/09/21 19:17*	*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 14:14	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 15:24	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		11/09/21 15:18	11/10/21 02:58	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/09/21 15:18	11/10/21 02:58	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/09/21 15:18	11/10/21 02:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*111*		*70 - 130*	*11/09/21 15:18*	*11/10/21 02:58*	*1*
o-Terphenyl	*117*		*70 - 130*	*11/09/21 15:18*	*11/10/21 02:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**514**		4.99		mg/Kg			11/18/21 16:36	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 293 Flowline

Job ID: 890-1545-1
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)										
880-8083-A-3-B MS	Matrix Spike	126	106										
880-8083-A-3-C MSD	Matrix Spike Duplicate	122	103										
890-1545-1	SW05	97	94										
890-1545-2	SW08	121	105										
LCS 880-11794/1-A	Lab Control Sample	113	102										
LCSD 880-11794/2-A	Lab Control Sample Dup	116	101										
MB 880-11794/5-A	Method Blank	119	106										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-1544-A-1-F MS	Matrix Spike	107	103										
890-1544-A-1-G MSD	Matrix Spike Duplicate	107	104										
890-1545-1	SW05	116	120										
890-1545-2	SW08	111	117										
LCS 880-11848/2-A	Lab Control Sample	119	128										
LCSD 880-11848/3-A	Lab Control Sample Dup	119	122										
MB 880-11848/1-A	Method Blank	121	134 S1+										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flowline

Job ID: 890-1545-1
SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-11794/5-A
Matrix: Solid
Analysis Batch: 11793

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11794

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/09/21 08:29	11/09/21 11:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/09/21 08:29	11/09/21 11:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/09/21 08:29	11/09/21 11:26	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/09/21 08:29	11/09/21 11:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/09/21 08:29	11/09/21 11:26	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/09/21 08:29	11/09/21 11:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*11/09/21 08:29*	*11/09/21 11:26*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*11/09/21 08:29*	*11/09/21 11:26*	*1*

Lab Sample ID: LCS 880-11794/1-A
Matrix: Solid
Analysis Batch: 11793

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11794

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09176		mg/Kg		92	70 - 130		
Toluene			0.100	0.09873		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.09888		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.2005		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.09827		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-11794/2-A
Matrix: Solid
Analysis Batch: 11793

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11794

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09636		mg/Kg		96	70 - 130	5	35
Toluene			0.100	0.1045		mg/Kg		104	70 - 130	6	35
Ethylbenzene			0.100	0.1099		mg/Kg		110	70 - 130	11	35
m-Xylene & p-Xylene			0.200	0.2151		mg/Kg		108	70 - 130	7	35
o-Xylene			0.100	0.1103		mg/Kg		110	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 880-8083-A-3-B MS
Matrix: Solid
Analysis Batch: 11793

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 11794

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00201	U	0.0998	0.08330		mg/Kg		83	70 - 130		
Toluene	<0.00201	U	0.0998	0.08994		mg/Kg		88	70 - 130		

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flowline

Job ID: 890-1545-1
SDG: 31403236.020.0129

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

Lab Sample ID: 880-8083-A-3-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 11793 — **Prep Batch: 11794**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00201	U	0.0998	0.09268		mg/Kg		93	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1837		mg/Kg		90	70 - 130
o-Xylene	<0.00201	U	0.0998	0.09012		mg/Kg		89	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 880-8083-A-3-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 11793 — **Prep Batch: 11794**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0996	0.08526		mg/Kg		85	70 - 130	2	35
Toluene	<0.00201	U	0.0996	0.08894		mg/Kg		88	70 - 130	1	35
Ethylbenzene	<0.00201	U	0.0996	0.09281		mg/Kg		93	70 - 130	0	35
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1748		mg/Kg		86	70 - 130	5	35
o-Xylene	<0.00201	U	0.0996	0.08654		mg/Kg		85	70 - 130	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

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

Lab Sample ID: MB 880-11848/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 11800 — **Prep Batch: 11848**

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		11/09/21 15:18	11/09/21 20:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/09/21 15:18	11/09/21 20:36	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/09/21 15:18	11/09/21 20:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*11/09/21 15:18*	*11/09/21 20:36*	*1*
o-Terphenyl	*134*	*S1+*	*70 - 130*	*11/09/21 15:18*	*11/09/21 20:36*	*1*

Lab Sample ID: LCS 880-11848/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 11800 — **Prep Batch: 11848**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10			1000	986.0		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1288		mg/Kg		129	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flowline

Job ID: 890-1545-1
SDG: 31403236.020.0129

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

Lab Sample ID: LCS 880-11848/2-A
Matrix: Solid
Analysis Batch: 11800

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11848

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	119		70 - 130
o-Terphenyl	128		70 - 130

Lab Sample ID: LCSD 880-11848/3-A
Matrix: Solid
Analysis Batch: 11800

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11848

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	992.3		mg/Kg		99	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1104		mg/Kg		110	70 - 130	15	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	119		70 - 130
o-Terphenyl	122		70 - 130

Lab Sample ID: 890-1544-A-1-F MS
Matrix: Solid
Analysis Batch: 11800

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 11848

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	1145		mg/Kg		115	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1151		mg/Kg		115	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: 890-1544-A-1-G MSD
Matrix: Solid
Analysis Batch: 11800

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 11848

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	1198		mg/Kg		120	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	1163		mg/Kg		116	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	104		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flowline

Job ID: 890-1545-1
SDG: 31403236.020.0129

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-11956/1-A
Matrix: Solid
Analysis Batch: 12586

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			11/18/21 11:55	1

Lab Sample ID: LCS 880-11956/2-A
Matrix: Solid
Analysis Batch: 12586

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	260.8		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-11956/3-A
Matrix: Solid
Analysis Batch: 12586

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	261.2		mg/Kg		104	90 - 110	0	20

Lab Sample ID: 880-8139-A-17-C MS
Matrix: Solid
Analysis Batch: 12586

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	12600	F1	5000	16920	F1	mg/Kg		87	90 - 110		

Lab Sample ID: 880-8139-A-17-D MSD
Matrix: Solid
Analysis Batch: 12586

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	12600	F1	5000	16740	F1	mg/Kg		84	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 293 Flowline

Job ID: 890-1545-1
SDG: 31403236.020.0129

GC VOA

Analysis Batch: 11793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1545-1	SW05	Total/NA	Solid	8021B	11794
890-1545-2	SW08	Total/NA	Solid	8021B	11794
MB 880-11794/5-A	Method Blank	Total/NA	Solid	8021B	11794
LCS 880-11794/1-A	Lab Control Sample	Total/NA	Solid	8021B	11794
LCSD 880-11794/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11794
880-8083-A-3-B MS	Matrix Spike	Total/NA	Solid	8021B	11794
880-8083-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	11794

Prep Batch: 11794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1545-1	SW05	Total/NA	Solid	5035	
890-1545-2	SW08	Total/NA	Solid	5035	
MB 880-11794/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11794/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11794/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-8083-A-3-B MS	Matrix Spike	Total/NA	Solid	5035	
880-8083-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 12040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1545-1	SW05	Total/NA	Solid	Total BTEX	
890-1545-2	SW08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 11800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1545-1	SW05	Total/NA	Solid	8015B NM	11848
890-1545-2	SW08	Total/NA	Solid	8015B NM	11848
MB 880-11848/1-A	Method Blank	Total/NA	Solid	8015B NM	11848
LCS 880-11848/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	11848
LCSD 880-11848/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	11848
890-1544-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	11848
890-1544-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	11848

Prep Batch: 11848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1545-1	SW05	Total/NA	Solid	8015NM Prep	
890-1545-2	SW08	Total/NA	Solid	8015NM Prep	
MB 880-11848/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-11848/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-11848/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1544-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1544-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 12045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1545-1	SW05	Total/NA	Solid	8015 NM	
890-1545-2	SW08	Total/NA	Solid	8015 NM	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1545-1
Project/Site: PLU 293 Flowline SDG: 31403236.020.0129

HPLC/IC

Leach Batch: 11956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1545-1	SW05	Soluble	Solid	DI Leach	
890-1545-2	SW08	Soluble	Solid	DI Leach	
MB 880-11956/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11956/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11956/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-8139-A-17-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-8139-A-17-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 12586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1545-1	SW05	Soluble	Solid	300.0	11956
890-1545-2	SW08	Soluble	Solid	300.0	11956
MB 880-11956/1-A	Method Blank	Soluble	Solid	300.0	11956
LCS 880-11956/2-A	Lab Control Sample	Soluble	Solid	300.0	11956
LCSD 880-11956/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11956
880-8139-A-17-C MS	Matrix Spike	Soluble	Solid	300.0	11956
880-8139-A-17-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	11956

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 293 Flowline

Job ID: 890-1545-1
SDG: 31403236.020.0129

Client Sample ID: SW05

Date Collected: 11/05/21 15:14
Date Received: 11/08/21 13:26

Lab Sample ID: 890-1545-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11794	11/09/21 08:29	MR	XEN MID
Total/NA	Analysis	8021B		1	11793	11/09/21 18:57	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 15:24	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11848	11/09/21 15:18	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11800	11/10/21 02:35	AJ	XEN MID
Soluble	Leach	DI Leach			11956	11/10/21 15:04	SC	XEN MID
Soluble	Analysis	300.0		1	12586	11/18/21 16:29	CH	XEN MID

Client Sample ID: SW08

Date Collected: 11/05/21 14:45
Date Received: 11/08/21 13:26

Lab Sample ID: 890-1545-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11794	11/09/21 08:29	MR	XEN MID
Total/NA	Analysis	8021B		1	11793	11/09/21 19:17	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 15:24	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11848	11/09/21 15:18	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11800	11/10/21 02:58	AJ	XEN MID
Soluble	Leach	DI Leach			11956	11/10/21 15:04	SC	XEN MID
Soluble	Analysis	300.0		1	12586	11/18/21 16:36	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: 890-1545-1
Project/Site: PLU 293 Flowline 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.
Project/Site: PLU 293 Flowline

Job ID: 890-1545-1
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 293 Flowline

Job ID: 890-1545-1
SDG: 31403236.020.0129

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1545-1	SW05	Solid	11/05/21 15:14	11/08/21 13:26	0 - 4
890-1545-2	SW08	Solid	11/05/21 14:45	11/08/21 13:26	0 - 4

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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:	Dan Moir	Bill to: (if different)	Advance Energy
Company Name:	WSP USA Inc. Permian Ops.	Company Name:	XTO
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432.704.5178	Email:	ggreen@ltenv.com ; dmoir@ltenv.com

Work Order Comments

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

Project Name:	NLV 243 Flowline
Project Number:	31403236.020.0124
P.O. Number:	
Sampler's Name:	Travis Cuesy

Turn Around

Routine ☒
Rush:
Due Date:

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	3.4 / 3.2	Thermometer ID	
Received Intact:	(Yes) No	TWN-007	
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
SW05	S	11-05-21	1544	0-4	1	X	X	X	comp 5
SW08	S		1445	0-4	1	X	X	X	comp 5

890-1545 Chain of Custody

Work Order Notes

IN: NAPP2126045826
CC: 113424 3091
API: 30-015-34877

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

Sample Comments

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		11.8.21 1324	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

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11/18/2021

Received by OCD: 6/27/2022 11:07:42 AM

Released to Imaging: 9/22/2022 12:11:24 PM

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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

11/18/2021

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No.: 890-499 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 #: 890-1545-1
Address: 1211 W Florida Ave	Due Date Requested: 11/12/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: PLU 293 Flowline	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:										
SW05 (890-1545-1)	11/5/21	15 14 Mountain		Solid			X	X	X	X	X	1	
SW08 (890-1545-2)	11/5/21	14 45 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	[signature]	1158		[signature] KRAMER	11.9.21	
2	Relinquished by	Date/Time	Company	Received by	Date/Time 1110	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. 4.2/4.3

Ver: 06/08/2021

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Received by OCD: 6/27/2022 11:07:42 AM

Released to Imaging: 9/22/2022 12:11:24 PM

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1545-1
SDG Number: 31403236.020.0129

Login Number: 1545
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: 890-1545-1
SDG Number: 31403236.020.0129

Login Number: 1545
List Number: 2
Creator: Lowe, Katie

List Source: Eurofins Xenco, Midland
List Creation: 11/09/21 11:14 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").	True	

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-1556-1
Laboratory Sample Delivery Group: 31403236.020.0129
Client Project/Site: PLU293 Flow Line

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
11/15/2021 3:49:03 PM

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

LINKS
Review your project results through TotalAccess
Have a Question? Ask The Expert
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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

Client: WSP USA Inc.
Project/Site: PLU293 Flow Line

Laboratory Job ID: 890-1556-1
SDG: 31403236.020.0129

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1556-1
Project/Site: PLU293 Flow Line 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
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc. Job ID: 890-1556-1
Project/Site: PLU293 Flow Line SDG: 31403236.020.0129

Job ID: 890-1556-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1556-1

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: PLU293 Flow Line

Job ID: 890-1556-1
SDG: 31403236.020.0129

Client Sample ID: FS01

Lab Sample ID: 890-1556-1
Matrix: Solid
Date Collected: 11/10/21 10:30
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 08:57	11/11/21 13:47	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/11/21 08:57	11/11/21 13:47	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/11/21 08:57	11/11/21 13:47	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/11/21 08:57	11/11/21 13:47	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/11/21 08:57	11/11/21 13:47	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/11/21 08:57	11/11/21 13:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*70 - 130*	*11/11/21 08:57*	*11/11/21 13:47*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*11/11/21 08:57*	*11/11/21 13:47*	*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 14:02	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 13:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/11/21 08:21	11/11/21 13:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/11/21 08:21	11/11/21 13:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*11/11/21 08:21*	*11/11/21 13:16*	*1*
o-Terphenyl	*109*		*70 - 130*	*11/11/21 08:21*	*11/11/21 13:16*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**104**		4.95		mg/Kg			11/13/21 15:25	1

Client Sample ID: FS02

Lab Sample ID: 890-1556-2
Matrix: Solid
Date Collected: 11/10/21 10:31
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 14:07	1
Toluene	<0.00198	U	0.00198		mg/Kg		11/11/21 08:57	11/11/21 14:07	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		11/11/21 08:57	11/11/21 14:07	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		11/11/21 08:57	11/11/21 14:07	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		11/11/21 08:57	11/11/21 14:07	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		11/11/21 08:57	11/11/21 14:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*150*	*S1+*	*70 - 130*	*11/11/21 08:57*	*11/11/21 14:07*	*1*

Client Sample Results

Client: WSP USA Inc. Job ID: 890-1556-1
Project/Site: PLU293 Flow Line SDG: 31403236.020.0129

Client Sample ID: FS02 — Lab Sample ID: 890-1556-2

Date Collected: 11/10/21 10:31 **Matrix: Solid**
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)	*115*		*70 - 130*	*11/11/21 08:57*	*11/11/21 14:07*	*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 14:02	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 13:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/11/21 08:21	11/11/21 13:38	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/11/21 08:21	11/11/21 13:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*101*		*70 - 130*	*11/11/21 08:21*	*11/11/21 13:38*	*1*
o-Terphenyl	*106*		*70 - 130*	*11/11/21 08:21*	*11/11/21 13:38*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**636**		4.98	mg/Kg			11/11/21 17:12	1

Client Sample ID: FS03 — Lab Sample ID: 890-1556-3

Date Collected: 11/10/21 10:32 **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	<0.00200	U	0.00200	mg/Kg		11/11/21 08:57	11/11/21 14:27	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/11/21 08:57	11/11/21 14:27	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/11/21 08:57	11/11/21 14:27	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		11/11/21 08:57	11/11/21 14:27	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/11/21 08:57	11/11/21 14:27	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		11/11/21 08:57	11/11/21 14:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*11/11/21 08:57*	*11/11/21 14:27*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*11/11/21 08:57*	*11/11/21 14:27*	*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			11/11/21 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

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc. Job ID: 890-1556-1
Project/Site: PLU293 Flow Line SDG: 31403236.020.0129

Client Sample ID: FS03 Lab Sample ID: 890-1556-3

Date Collected: 11/10/21 10:32 **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	<50.0	U	50.0		mg/Kg		11/11/21 08:21	11/11/21 13:59	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/11/21 08:21	11/11/21 13:59	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/11/21 08:21	11/11/21 13:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*11/11/21 08:21*	*11/11/21 13:59*	*1*
o-Terphenyl	*101*		*70 - 130*	*11/11/21 08:21*	*11/11/21 13:59*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**447**		4.95		mg/Kg			11/11/21 17:19	1

Client Sample ID: FS04 Lab Sample ID: 890-1556-4

Date Collected: 11/10/21 10:33 **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	<0.00200	U	0.00200		mg/Kg		11/11/21 08:57	11/11/21 14:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/11/21 08:57	11/11/21 14:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/11/21 08:57	11/11/21 14:48	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/11/21 08:57	11/11/21 14:48	1
o-Xylene	**0.00369**		0.00200		mg/Kg		11/11/21 08:57	11/11/21 14:48	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/11/21 08:57	11/11/21 14:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*11/11/21 08:57*	*11/11/21 14:48*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*11/11/21 08:57*	*11/11/21 14:48*	*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 14:02	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 14:21	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/11/21 08:21	11/11/21 14:21	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/11/21 08:21	11/11/21 14:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*11/11/21 08:21*	*11/11/21 14:21*	*1*
o-Terphenyl	*101*		*70 - 130*	*11/11/21 08:21*	*11/11/21 14:21*	*1*

Client Sample Results

Client: WSP USA Inc. Job ID: 890-1556-1
Project/Site: PLU293 Flow Line SDG: 31403236.020.0129

Client Sample ID: FS04 Lab Sample ID: 890-1556-4

Date Collected: 11/10/21 10:33 **Matrix: Solid**
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	5530		49.9		mg/Kg			11/11/21 17:26	10

Client Sample ID: FS05 Lab Sample ID: 890-1556-5

Date Collected: 11/10/21 10:34 **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 08:57	11/11/21 15:08	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/11/21 08:57	11/11/21 15:08	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/11/21 08:57	11/11/21 15:08	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/11/21 08:57	11/11/21 15:08	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/11/21 08:57	11/11/21 15:08	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/11/21 08:57	11/11/21 15:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*11/11/21 08:57*	*11/11/21 15:08*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*11/11/21 08:57*	*11/11/21 15:08*	*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 14:02	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 08:21	11/11/21 14:42	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		11/11/21 08:21	11/11/21 14:42	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		11/11/21 08:21	11/11/21 14:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*11/11/21 08:21*	*11/11/21 14:42*	*1*
o-Terphenyl	*101*		*70 - 130*	*11/11/21 08:21*	*11/11/21 14:42*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	858		4.98		mg/Kg			11/11/21 17:34	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU293 Flow Line

Job ID: 890-1556-1
SDG: 31403236.020.0129

Client Sample ID: FS06

Lab Sample ID: 890-1556-6
Matrix: Solid
Date Collected: 11/10/21 10:35
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 15:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/11/21 08:57	11/11/21 15:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/11/21 08:57	11/11/21 15:29	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/11/21 08:57	11/11/21 15:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/11/21 08:57	11/11/21 15:29	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/11/21 08:57	11/11/21 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*11/11/21 08:57*	*11/11/21 15:29*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*11/11/21 08:57*	*11/11/21 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			11/11/21 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 15:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/11/21 08:21	11/11/21 15:04	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/11/21 08:21	11/11/21 15:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*11/11/21 08:21*	*11/11/21 15:04*	*1*
o-Terphenyl	*110*		*70 - 130*	*11/11/21 08:21*	*11/11/21 15:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**76.0**		4.95		mg/Kg			11/11/21 17:41	1

Client Sample ID: FS07

Lab Sample ID: 890-1556-7
Matrix: Solid
Date Collected: 11/10/21 10:36
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 15:49	1
Toluene	**0.00361**		0.00200		mg/Kg		11/11/21 08:57	11/11/21 15:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/11/21 08:57	11/11/21 15:49	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/11/21 08:57	11/11/21 15:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/11/21 08:57	11/11/21 15:49	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/11/21 08:57	11/11/21 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*11/11/21 08:57*	*11/11/21 15:49*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU293 Flow Line

Job ID: 890-1556-1
SDG: 31403236.020.0129

Client Sample ID: FS07
Date Collected: 11/10/21 10:36
Date Received: 11/10/21 11:23
Sample Depth: 4

Lab Sample ID: 890-1556-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*11/11/21 08:57*	*11/11/21 15:49*	*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	49.9		mg/Kg		11/11/21 08:21	11/11/21 15:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/11/21 08:21	11/11/21 15:25	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/11/21 08:21	11/11/21 15:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*11/11/21 08:21*	*11/11/21 15:25*	*1*
o-Terphenyl	*113*		*70 - 130*	*11/11/21 08:21*	*11/11/21 15:25*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**149**		5.02		mg/Kg			11/11/21 18:04	1

Surrogate Summary

Client: WSP USA Inc. Job ID: 890-1556-1
Project/Site: PLU293 Flow Line 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-A-1-A MS	Matrix Spike	117	113
890-1555-A-1-B MSD	Matrix Spike Duplicate	116	101
890-1556-1	FS01	77	72
890-1556-2	FS02	150 S1+	115
890-1556-3	FS03	116	102
890-1556-4	FS04	130	74
890-1556-5	FS05	107	118
890-1556-6	FS06	118	104
890-1556-7	FS07	131 S1+	101
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-A-1-D MS	Matrix Spike	100	99
890-1556-1	FS01	104	109
890-1556-2	FS02	101	106
890-1556-3	FS03	98	101
890-1556-4	FS04	97	101
890-1556-5	FS05	99	101
890-1556-6	FS06	105	110
890-1556-7	FS07	106	113
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-A-1-E MSD	Matrix Spike Duplicate		

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU293 Flow Line

Job ID: 890-1556-1
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-A-1-B MSD
Matrix: Solid
Analysis Batch: 11997

Client Sample ID: Matrix Spike Duplicate
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					

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QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU293 Flow Line

Job ID: 890-1556-1
SDG: 31403236.020.0129

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

Lab Sample ID: 890-1555-A-1-B MSD
Matrix: Solid
Analysis Batch: 11997

Client Sample ID: Matrix Spike Duplicate
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-A-1-A MS
Matrix: Solid
Analysis Batch: 11997

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)	*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: PLU293 Flow Line

Job ID: 890-1556-1
SDG: 31403236.020.0129

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

Lab Sample ID: LCSD 880-11990/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 11992 — **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-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 11992 — **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-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 11992 — **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 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 12046

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: PLU293 Flow Line

Job ID: 890-1556-1
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: 890-1556-6 MS
Matrix: Solid
Analysis Batch: 12046

Client Sample ID: FS06
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: 890-1556-6 MSD
Matrix: Solid
Analysis Batch: 12046

Client Sample ID: FS06
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: 880-8152-A-1-B 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	148		253	404.8		mg/Kg		102	90 - 110		

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU293 Flow Line

Job ID: 890-1556-1
SDG: 31403236.020.0129

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-8152-A-1-C 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	148		253	405.8		mg/Kg		102	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1556-1
Project/Site: PLU293 Flow Line SDG: 31403236.020.0129

GC VOA

Prep Batch: 11996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1556-1	FS01	Total/NA	Solid	5035	
890-1556-2	FS02	Total/NA	Solid	5035	
890-1556-3	FS03	Total/NA	Solid	5035	
890-1556-4	FS04	Total/NA	Solid	5035	
890-1556-5	FS05	Total/NA	Solid	5035	
890-1556-6	FS06	Total/NA	Solid	5035	
890-1556-7	FS07	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-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 11997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1556-1	FS01	Total/NA	Solid	8021B	11996
890-1556-2	FS02	Total/NA	Solid	8021B	11996
890-1556-3	FS03	Total/NA	Solid	8021B	11996
890-1556-4	FS04	Total/NA	Solid	8021B	11996
890-1556-5	FS05	Total/NA	Solid	8021B	11996
890-1556-6	FS06	Total/NA	Solid	8021B	11996
890-1556-7	FS07	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-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	
890-1555-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	11996

Analysis Batch: 12040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1556-1	FS01	Total/NA	Solid	Total BTEX	
890-1556-2	FS02	Total/NA	Solid	Total BTEX	
890-1556-3	FS03	Total/NA	Solid	Total BTEX	
890-1556-4	FS04	Total/NA	Solid	Total BTEX	
890-1556-5	FS05	Total/NA	Solid	Total BTEX	
890-1556-6	FS06	Total/NA	Solid	Total BTEX	
890-1556-7	FS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 11990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1556-1	FS01	Total/NA	Solid	8015NM Prep	
890-1556-2	FS02	Total/NA	Solid	8015NM Prep	
890-1556-3	FS03	Total/NA	Solid	8015NM Prep	
890-1556-4	FS04	Total/NA	Solid	8015NM Prep	
890-1556-5	FS05	Total/NA	Solid	8015NM Prep	
890-1556-6	FS06	Total/NA	Solid	8015NM Prep	
890-1556-7	FS07	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	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1556-1
Project/Site: PLU293 Flow Line SDG: 31403236.020.0129

GC Semi VOA (Continued)

Prep Batch: 11990 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1555-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1555-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 11992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1556-1	FS01	Total/NA	Solid	8015B NM	11990
890-1556-2	FS02	Total/NA	Solid	8015B NM	11990
890-1556-3	FS03	Total/NA	Solid	8015B NM	11990
890-1556-4	FS04	Total/NA	Solid	8015B NM	11990
890-1556-5	FS05	Total/NA	Solid	8015B NM	11990
890-1556-6	FS06	Total/NA	Solid	8015B NM	11990
890-1556-7	FS07	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-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	11990
890-1555-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	11990

Analysis Batch: 12045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1556-1	FS01	Total/NA	Solid	8015 NM	
890-1556-2	FS02	Total/NA	Solid	8015 NM	
890-1556-3	FS03	Total/NA	Solid	8015 NM	
890-1556-4	FS04	Total/NA	Solid	8015 NM	
890-1556-5	FS05	Total/NA	Solid	8015 NM	
890-1556-6	FS06	Total/NA	Solid	8015 NM	
890-1556-7	FS07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 11932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1556-1	FS01	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	
880-8152-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-8152-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 12024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1556-2	FS02	Soluble	Solid	DI Leach	
890-1556-3	FS03	Soluble	Solid	DI Leach	
890-1556-4	FS04	Soluble	Solid	DI Leach	
890-1556-5	FS05	Soluble	Solid	DI Leach	
890-1556-6	FS06	Soluble	Solid	DI Leach	
890-1556-7	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	
890-1556-6 MS	FS06	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1556-1
Project/Site: PLU293 Flow Line SDG: 31403236.020.0129

HPLC/IC (Continued)

Leach Batch: 12024 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1556-6 MSD	FS06	Soluble	Solid	DI Leach	

Analysis Batch: 12046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1556-2	FS02	Soluble	Solid	300.0	12024
890-1556-3	FS03	Soluble	Solid	300.0	12024
890-1556-4	FS04	Soluble	Solid	300.0	12024
890-1556-5	FS05	Soluble	Solid	300.0	12024
890-1556-6	FS06	Soluble	Solid	300.0	12024
890-1556-7	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
890-1556-6 MS	FS06	Soluble	Solid	300.0	12024
890-1556-6 MSD	FS06	Soluble	Solid	300.0	12024

Analysis Batch: 12195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1556-1	FS01	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
880-8152-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	11932
880-8152-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	11932

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1556-1
Project/Site: PLU293 Flow Line SDG: 31403236.020.0129

Client Sample ID: FS01 Lab Sample ID: 890-1556-1

Date Collected: 11/10/21 10:30 **Matrix: Solid**
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			11996	11/11/21 08:57	KL	XEN MID
Total/NA	Analysis	8021B		1	11997	11/11/21 13:47	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 13:16	AJ	XEN MID
Soluble	Leach	DI Leach			11932	11/12/21 10:53	SC	XEN MID
Soluble	Analysis	300.0		1	12195	11/13/21 15:25	CH	XEN MID

Client Sample ID: FS02 Lab Sample ID: 890-1556-2

Date Collected: 11/10/21 10:31 **Matrix: Solid**
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			11996	11/11/21 08:57	KL	XEN MID
Total/NA	Analysis	8021B		1	11997	11/11/21 14:07	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 13:38	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 17:12	SC	XEN MID

Client Sample ID: FS03 Lab Sample ID: 890-1556-3

Date Collected: 11/10/21 10:32 **Matrix: Solid**
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			11996	11/11/21 08:57	KL	XEN MID
Total/NA	Analysis	8021B		1	11997	11/11/21 14:27	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 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 17:19	SC	XEN MID

Client Sample ID: FS04 Lab Sample ID: 890-1556-4

Date Collected: 11/10/21 10:33 **Matrix: Solid**
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			11996	11/11/21 08:57	KL	XEN MID
Total/NA	Analysis	8021B		1	11997	11/11/21 14:48	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	12040	11/11/21 14:02	AJ	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1556-1
Project/Site: PLU293 Flow Line SDG: 31403236.020.0129

Client Sample ID: FS04 Lab Sample ID: 890-1556-4

Date Collected: 11/10/21 10:33 **Matrix: Solid**
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	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 14:21	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 17:26	SC	XEN MID

Client Sample ID: FS05 Lab Sample ID: 890-1556-5

Date Collected: 11/10/21 10:34 **Matrix: Solid**
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			11996	11/11/21 08:57	KL	XEN MID
Total/NA	Analysis	8021B		1	11997	11/11/21 15:08	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 14:42	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 17:34	SC	XEN MID

Client Sample ID: FS06 Lab Sample ID: 890-1556-6

Date Collected: 11/10/21 10:35 **Matrix: Solid**
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			11996	11/11/21 08:57	KL	XEN MID
Total/NA	Analysis	8021B		1	11997	11/11/21 15:29	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 15:04	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 17:41	SC	XEN MID

Client Sample ID: FS07 Lab Sample ID: 890-1556-7

Date Collected: 11/10/21 10:36 **Matrix: Solid**
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			11996	11/11/21 08:57	KL	XEN MID
Total/NA	Analysis	8021B		1	11997	11/11/21 15:49	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			11990	11/11/21 08:21	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11992	11/11/21 15:25	AJ	XEN MID

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1556-1
Project/Site: PLU293 Flow Line SDG: 31403236.020.0129

Client Sample ID: FS07 **Lab Sample ID: 890-1556-7**
Date Collected: 11/10/21 10:36 **Matrix: Solid**
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 18:04	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: 890-1556-1
Project/Site: PLU293 Flow Line 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: 890-1556-1
Project/Site: PLU293 Flow Line 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: PLU293 Flow Line

Job ID: 890-1556-1
SDG: 31403236.020.0129

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1556-1	FS01	Solid	11/10/21 10:30	11/10/21 11:23	4
890-1556-2	FS02	Solid	11/10/21 10:31	11/10/21 11:23	4
890-1556-3	FS03	Solid	11/10/21 10:32	11/10/21 11:23	4
890-1556-4	FS04	Solid	11/10/21 10:33	11/10/21 11:23	4
890-1556-5	FS05	Solid	11/10/21 10:34	11/10/21 11:23	4
890-1556-6	FS06	Solid	11/10/21 10:35	11/10/21 11:23	4
890-1556-7	FS07	Solid	11/10/21 10:36	11/10/21 11:23	4

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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)	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 ☐ RRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 293 Flow Line	Turn Around	
Project Number:	31403236.020.0129	Routine	X
P.O. Number:		Rush:	
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	TNM-007
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	CIP

ANALYSIS REQUEST

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	1030	4	1	x	x	x	Composite
FS02	S	11/10/2021	1031	4	1	x	x	x	Composite
FS03	S	11/10/2021	1032	4	1	x	x	x	Composite
FS04	S	11/10/2021	1033	4	1	x	x	x	Composite
FS05	S	11/10/2021	1034	4	1	x	x	x	Composite
FS06	S	11/10/2021	1035	4	1	x	x	x	Composite
FS07	S	11/10/2021	1036	4	1	x	x	x	Composite

890-1556 Chain of Custody

Work Order Notes

IN:NAPP2126045826
CC:1139243001
API:30-015-34877

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

Sample Comments

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

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11/15/2021

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 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 #: 890-1556-1
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: PLU293 Flow Line	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:					X	X							
FS01 (890-1556-1)	11/10/21	10 30 Mountain		Solid			X	X	X	X	X	1	
FS02 (890-1556-2)	11/10/21	10 31 Mountain		Solid			X	X	X	X	X	1	
FS03 (890-1556-3)	11/10/21	10 32 Mountain		Solid			X	X	X	X	X	1	
FS04 (890-1556-4)	11/10/21	10 33 Mountain		Solid			X	X	X	X	X	1	
FS05 (890-1556-5)	11/10/21	10 34 Mountain		Solid			X	X	X	X	X	1	
FS06 (890-1556-6)	11/10/21	10 35 Mountain		Solid			X	X	X	X	X	1	
FS07 (890-1556-7)	11/10/21	10 36 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
Clor Corp 11.10.21			Leticia R	11/11/21 1125	
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

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11/15/2021
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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1556-1
SDG Number: 31403236.020.0129

Login Number: 1556
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: 890-1556-1
SDG Number: 31403236.020.0129

Login Number: 1556
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: 890-1635-1
Client Project/Site: PLU 293 Flow Line

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
12/10/2021 1:32:52 PM

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

LINKS
Review your project results through TotalAccess
Have a Question? Ask The Expert
Visit us at: www.eurofinsus.com/Env

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 293 Flow Line

Laboratory Job ID: 890-1635-1

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1635-1
Project/Site: PLU 293 Flow Line

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
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc. Job ID: 890-1635-1
Project/Site: PLU 293 Flow Line

Job ID: 890-1635-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1635-1

Receipt
The samples were received on 11/24/2021 10:48 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 1.2°C

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: FS15 (890-1635-1), FS16 (890-1635-2), FS17 (890-1635-3) and FS14 (890-1635-4). 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
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 880-13647 and analytical batch 880-14304 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 293 Flow Line

Job ID: 890-1635-1

Client Sample ID: FS15

Lab Sample ID: 890-1635-1
Matrix: Solid
Date Collected: 11/22/21 16:10
Date Received: 11/24/21 10:48
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 14:23	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 14:23	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 14:23	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/01/21 08:45	12/01/21 14:23	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 14:23	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/01/21 08:45	12/01/21 14:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*154*	*S1+*	*70 - 130*	*12/01/21 08:45*	*12/01/21 14:23*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*12/01/21 08:45*	*12/01/21 14:23*	*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			12/03/21 10:31	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			12/06/21 15:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/02/21 11:27	12/03/21 10:34	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/02/21 11:27	12/03/21 10:34	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/02/21 11:27	12/03/21 10:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*12/02/21 11:27*	*12/03/21 10:34*	*1*
o-Terphenyl	*105*		*70 - 130*	*12/02/21 11:27*	*12/03/21 10:34*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3560**		25.0		mg/Kg			12/09/21 03:46	5

Client Sample ID: FS16

Lab Sample ID: 890-1635-2
Matrix: Solid
Date Collected: 11/22/21 16:00
Date Received: 11/24/21 10:48
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 14:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 14:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 14:49	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/01/21 08:45	12/01/21 14:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 14:49	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/01/21 08:45	12/01/21 14:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*154*	*S1+*	*70 - 130*	*12/01/21 08:45*	*12/01/21 14:49*	*1*

Client Sample Results

Client: WSP USA Inc. Job ID: 890-1635-1
Project/Site: PLU 293 Flow Line

Client Sample ID: FS16 Lab Sample ID: 890-1635-2

Date Collected: 11/22/21 16:00 **Matrix: Solid**
Date Received: 11/24/21 10:48
Sample Depth: 0.5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*12/01/21 08:45*	*12/01/21 14:49*	*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			12/03/21 10:31	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**69.8**		50.0		mg/Kg			12/06/21 15:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/02/21 11:27	12/03/21 11:38	1
Diesel Range Organics (Over C10-C28)	**69.8**		50.0		mg/Kg		12/02/21 11:27	12/03/21 11:38	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/02/21 11:27	12/03/21 11:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*95*		*70 - 130*	*12/02/21 11:27*	*12/03/21 11:38*	*1*
o-Terphenyl	*107*		*70 - 130*	*12/02/21 11:27*	*12/03/21 11:38*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**991**		4.98		mg/Kg			12/09/21 18:22	1

Client Sample ID: FS17 Lab Sample ID: 890-1635-3

Date Collected: 11/22/21 16:05 **Matrix: Solid**
Date Received: 11/24/21 10:48
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		12/01/21 08:45	12/01/21 15:16	1
Toluene	<0.00198	U	0.00198		mg/Kg		12/01/21 08:45	12/01/21 15:16	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		12/01/21 08:45	12/01/21 15:16	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		12/01/21 08:45	12/01/21 15:16	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		12/01/21 08:45	12/01/21 15:16	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		12/01/21 08:45	12/01/21 15:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*161*	*S1+*	*70 - 130*	*12/01/21 08:45*	*12/01/21 15:16*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*12/01/21 08:45*	*12/01/21 15:16*	*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			12/03/21 10:31	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**55.8**		49.9		mg/Kg			12/06/21 15:44	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1635-1

Client Sample ID: FS17

Lab Sample ID: 890-1635-3
Matrix: Solid
Date Collected: 11/22/21 16:05
Date Received: 11/24/21 10:48
Sample Depth: 0.5

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		12/02/21 11:27	12/03/21 11:58	1
Diesel Range Organics (Over C10-C28)	**55.8**		49.9		mg/Kg		12/02/21 11:27	12/03/21 11:58	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/02/21 11:27	12/03/21 11:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*12/02/21 11:27*	*12/03/21 11:58*	*1*
o-Terphenyl	*110*		*70 - 130*	*12/02/21 11:27*	*12/03/21 11:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1500**		5.04		mg/Kg			12/09/21 18:47	1

Client Sample ID: FS14

Lab Sample ID: 890-1635-4
Matrix: Solid
Date Collected: 11/22/21 10:00
Date Received: 11/24/21 10:48
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 15:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 15:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 15:42	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/01/21 08:45	12/01/21 15:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 15:42	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/01/21 08:45	12/01/21 15:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*150*	*S1+*	*70 - 130*	*12/01/21 08:45*	*12/01/21 15:42*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*12/01/21 08:45*	*12/01/21 15:42*	*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			12/03/21 10:31	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**121**		49.9		mg/Kg			12/06/21 15:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/02/21 11:27	12/03/21 12:19	1
Diesel Range Organics (Over C10-C28)	**121**		49.9		mg/Kg		12/02/21 11:27	12/03/21 12:19	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/02/21 11:27	12/03/21 12:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*12/02/21 11:27*	*12/03/21 12:19*	*1*
o-Terphenyl	*89*		*70 - 130*	*12/02/21 11:27*	*12/03/21 12:19*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1635-1

Client Sample ID: FS14
Date Collected: 11/22/21 10:00
Date Received: 11/24/21 10:48
Sample Depth: 0.5

Lab Sample ID: 890-1635-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6710		49.9		mg/Kg			12/09/21 18:56	10

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1635-1

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)
890-1635-1	FS15	154 S1+	91
890-1635-1 MS	FS15	143 S1+	98
890-1635-1 MSD	FS15	119	114
890-1635-2	FS16	154 S1+	110
890-1635-3	FS17	161 S1+	115
890-1635-4	FS14	150 S1+	111
LCS 880-13362/1-A	Lab Control Sample	105	94
LCSD 880-13362/2-A	Lab Control Sample Dup	113	93
MB 880-13362/5-A	Method Blank	85	104

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)
890-1635-1	FS15	91	105
890-1635-1 MS	FS15	96	98
890-1635-1 MSD	FS15	96	96
890-1635-2	FS16	95	107
890-1635-3	FS17	96	110
890-1635-4	FS14	83	89
LCS 880-13730/2-A	Lab Control Sample	76	77
LCSD 880-13730/3-A	Lab Control Sample Dup	94	97
MB 880-13730/1-A	Method Blank	90	105

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1635-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-13362/5-A
Matrix: Solid
Analysis Batch: 13606

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 13362

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 13:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 13:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 13:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/01/21 08:45	12/01/21 13:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 13:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/01/21 08:45	12/01/21 13:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*12/01/21 08:45*	*12/01/21 13:56*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*12/01/21 08:45*	*12/01/21 13:56*	*1*

Lab Sample ID: LCS 880-13362/1-A
Matrix: Solid
Analysis Batch: 13606

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 13362

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09162		mg/Kg		92	70 - 130		
Toluene			0.100	0.1023		mg/Kg		102	70 - 130		
Ethylbenzene			0.100	0.09786		mg/Kg		98	70 - 130		
m-Xylene & p-Xylene			0.200	0.2177		mg/Kg		109	70 - 130		
o-Xylene			0.100	0.1009		mg/Kg		101	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: LCSD 880-13362/2-A
Matrix: Solid
Analysis Batch: 13606

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 13362

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09373		mg/Kg		94	70 - 130	2	35
Toluene			0.100	0.1043		mg/Kg		104	70 - 130	2	35
Ethylbenzene			0.100	0.1040		mg/Kg		104	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.2247		mg/Kg		112	70 - 130	3	35
o-Xylene			0.100	0.1040		mg/Kg		104	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: 890-1635-1 MS
Matrix: Solid
Analysis Batch: 13606

Client Sample ID: FS15
Prep Type: Total/NA
Prep Batch: 13362

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U	0.100	0.08943		mg/Kg		89	70 - 130		
Toluene	<0.00200	U	0.100	0.1030		mg/Kg		103	70 - 130		

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1635-1

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

Lab Sample ID: 890-1635-1 MS
Matrix: Solid
Analysis Batch: 13606

Client Sample ID: FS15
Prep Type: Total/NA
Prep Batch: 13362

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U	0.100	0.09992		mg/Kg		100	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.2191		mg/Kg		110	70 - 130
o-Xylene	<0.00200	U	0.100	0.1033		mg/Kg		103	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*143*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: 890-1635-1 MSD
Matrix: Solid
Analysis Batch: 13606

Client Sample ID: FS15
Prep Type: Total/NA
Prep Batch: 13362

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.08847		mg/Kg		89	70 - 130	1	35
Toluene	<0.00200	U	0.0996	0.09828		mg/Kg		99	70 - 130	5	35
Ethylbenzene	<0.00200	U	0.0996	0.09313		mg/Kg		94	70 - 130	7	35
m-Xylene & p-Xylene	<0.00399	U	0.199	0.2045		mg/Kg		103	70 - 130	7	35
o-Xylene	<0.00200	U	0.0996	0.09722		mg/Kg		98	70 - 130	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

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

Lab Sample ID: MB 880-13730/1-A
Matrix: Solid
Analysis Batch: 13825

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 13730

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/02/21 11:27	12/03/21 09:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/02/21 11:27	12/03/21 09:30	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/02/21 11:27	12/03/21 09:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*12/02/21 11:27*	*12/03/21 09:30*	*1*
o-Terphenyl	*105*		*70 - 130*	*12/02/21 11:27*	*12/03/21 09:30*	*1*

Lab Sample ID: LCS 880-13730/2-A
Matrix: Solid
Analysis Batch: 13825

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 13730

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10			1000	756.7		mg/Kg		76	70 - 130
Diesel Range Organics (Over C10-C28)			1000	746.3		mg/Kg		75	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1635-1

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

Lab Sample ID: LCS 880-13730/2-A
Matrix: Solid
Analysis Batch: 13825

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 13730

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	76		70 - 130
o-Terphenyl	77		70 - 130

Lab Sample ID: LCSD 880-13730/3-A
Matrix: Solid
Analysis Batch: 13825

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 13730

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	804.9		mg/Kg		80	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	848.7		mg/Kg		85	70 - 130	13	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	97		70 - 130

Lab Sample ID: 890-1635-1 MS
Matrix: Solid
Analysis Batch: 13825

Client Sample ID: FS15
Prep Type: Total/NA
Prep Batch: 13730

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	1081		mg/Kg		108	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1092		mg/Kg		106	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	96		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: 890-1635-1 MSD
Matrix: Solid
Analysis Batch: 13825

Client Sample ID: FS15
Prep Type: Total/NA
Prep Batch: 13730

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1175		mg/Kg		118	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1107		mg/Kg		107	70 - 130	1	20

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

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1635-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-13647/1-A
Matrix: Solid
Analysis Batch: 14304

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			12/09/21 01:33	1

Lab Sample ID: LCS 880-13647/2-A
Matrix: Solid
Analysis Batch: 14304

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	268.8		mg/Kg		108	90 - 110		

Lab Sample ID: LCSD 880-13647/3-A
Matrix: Solid
Analysis Batch: 14304

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	269.1		mg/Kg		108	90 - 110	0	20

Lab Sample ID: 890-1634-A-3-F MS
Matrix: Solid
Analysis Batch: 14304

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	<5.04	U F1	252	294.0	F1	mg/Kg		116	90 - 110		

Lab Sample ID: 890-1634-A-3-G MSD
Matrix: Solid
Analysis Batch: 14304

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	<5.04	U F1	252	294.6	F1	mg/Kg		116	90 - 110	0	20

Lab Sample ID: MB 880-13649/1-A
Matrix: Solid
Analysis Batch: 14366

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			12/09/21 17:57	1

Lab Sample ID: LCS 880-13649/2-A
Matrix: Solid
Analysis Batch: 14366

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	257.8		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-13649/3-A
Matrix: Solid
Analysis Batch: 14366

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	256.7		mg/Kg		103	90 - 110	0	20

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1635-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-1635-2 MS
Matrix: Solid
Analysis Batch: 14366

Client Sample ID: FS16
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	991		249	1261		mg/Kg		109	90 - 110		

Lab Sample ID: 890-1635-2 MSD
Matrix: Solid
Analysis Batch: 14366

Client Sample ID: FS16
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	991		249	1230		mg/Kg		96	90 - 110	3	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1635-1

GC VOA

Prep Batch: 13362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1635-1	FS15	Total/NA	Solid	5035	
890-1635-2	FS16	Total/NA	Solid	5035	
890-1635-3	FS17	Total/NA	Solid	5035	
890-1635-4	FS14	Total/NA	Solid	5035	
MB 880-13362/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-13362/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-13362/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1635-1 MS	FS15	Total/NA	Solid	5035	
890-1635-1 MSD	FS15	Total/NA	Solid	5035	

Analysis Batch: 13606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1635-1	FS15	Total/NA	Solid	8021B	13362
890-1635-2	FS16	Total/NA	Solid	8021B	13362
890-1635-3	FS17	Total/NA	Solid	8021B	13362
890-1635-4	FS14	Total/NA	Solid	8021B	13362
MB 880-13362/5-A	Method Blank	Total/NA	Solid	8021B	13362
LCS 880-13362/1-A	Lab Control Sample	Total/NA	Solid	8021B	13362
LCSD 880-13362/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	13362
890-1635-1 MS	FS15	Total/NA	Solid	8021B	13362
890-1635-1 MSD	FS15	Total/NA	Solid	8021B	13362

Analysis Batch: 13868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1635-1	FS15	Total/NA	Solid	Total BTEX	
890-1635-2	FS16	Total/NA	Solid	Total BTEX	
890-1635-3	FS17	Total/NA	Solid	Total BTEX	
890-1635-4	FS14	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 13730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1635-1	FS15	Total/NA	Solid	8015NM Prep	
890-1635-2	FS16	Total/NA	Solid	8015NM Prep	
890-1635-3	FS17	Total/NA	Solid	8015NM Prep	
890-1635-4	FS14	Total/NA	Solid	8015NM Prep	
MB 880-13730/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-13730/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-13730/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1635-1 MS	FS15	Total/NA	Solid	8015NM Prep	
890-1635-1 MSD	FS15	Total/NA	Solid	8015NM Prep	

Analysis Batch: 13825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1635-1	FS15	Total/NA	Solid	8015B NM	13730
890-1635-2	FS16	Total/NA	Solid	8015B NM	13730
890-1635-3	FS17	Total/NA	Solid	8015B NM	13730
890-1635-4	FS14	Total/NA	Solid	8015B NM	13730
MB 880-13730/1-A	Method Blank	Total/NA	Solid	8015B NM	13730
LCS 880-13730/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	13730

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1635-1

GC Semi VOA (Continued)

Analysis Batch: 13825 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-13730/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	13730
890-1635-1 MS	FS15	Total/NA	Solid	8015B NM	13730
890-1635-1 MSD	FS15	Total/NA	Solid	8015B NM	13730

Analysis Batch: 14112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1635-1	FS15	Total/NA	Solid	8015 NM	
890-1635-2	FS16	Total/NA	Solid	8015 NM	
890-1635-3	FS17	Total/NA	Solid	8015 NM	
890-1635-4	FS14	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 13647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1635-1	FS15	Soluble	Solid	DI Leach	
MB 880-13647/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-13647/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-13647/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1634-A-3-F MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1634-A-3-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 13649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1635-2	FS16	Soluble	Solid	DI Leach	
890-1635-3	FS17	Soluble	Solid	DI Leach	
890-1635-4	FS14	Soluble	Solid	DI Leach	
MB 880-13649/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-13649/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-13649/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1635-2 MS	FS16	Soluble	Solid	DI Leach	
890-1635-2 MSD	FS16	Soluble	Solid	DI Leach	

Analysis Batch: 14304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1635-1	FS15	Soluble	Solid	300.0	13647
MB 880-13647/1-A	Method Blank	Soluble	Solid	300.0	13647
LCS 880-13647/2-A	Lab Control Sample	Soluble	Solid	300.0	13647
LCSD 880-13647/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	13647
890-1634-A-3-F MS	Matrix Spike	Soluble	Solid	300.0	13647
890-1634-A-3-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	13647

Analysis Batch: 14366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1635-2	FS16	Soluble	Solid	300.0	13649
890-1635-3	FS17	Soluble	Solid	300.0	13649
890-1635-4	FS14	Soluble	Solid	300.0	13649
MB 880-13649/1-A	Method Blank	Soluble	Solid	300.0	13649
LCS 880-13649/2-A	Lab Control Sample	Soluble	Solid	300.0	13649
LCSD 880-13649/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	13649
890-1635-2 MS	FS16	Soluble	Solid	300.0	13649

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1635-1

HPLC/IC (Continued)

Analysis Batch: 14366 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1635-2 MSD	FS16	Soluble	Solid	300.0	13649

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1635-1

Client Sample ID: FS15

Lab Sample ID: 890-1635-1
Matrix: Solid
Date Collected: 11/22/21 16:10
Date Received: 11/24/21 10:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13362	12/01/21 08:45	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/01/21 14:23	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13730	12/02/21 11:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13825	12/03/21 10:34	AJ	XEN MID
Soluble	Leach	DI Leach			13647	12/01/21 11:21	CA	XEN MID
Soluble	Analysis	300.0		5	14304	12/09/21 03:46	CH	XEN MID

Client Sample ID: FS16

Lab Sample ID: 890-1635-2
Matrix: Solid
Date Collected: 11/22/21 16:00
Date Received: 11/24/21 10:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13362	12/01/21 08:45	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/01/21 14:49	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13730	12/02/21 11:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13825	12/03/21 11:38	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		1	14366	12/09/21 18:22	CH	XEN MID

Client Sample ID: FS17

Lab Sample ID: 890-1635-3
Matrix: Solid
Date Collected: 11/22/21 16:05
Date Received: 11/24/21 10:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13362	12/01/21 08:45	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/01/21 15:16	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13730	12/02/21 11:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13825	12/03/21 11:58	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		1	14366	12/09/21 18:47	CH	XEN MID

Client Sample ID: FS14

Lab Sample ID: 890-1635-4
Matrix: Solid
Date Collected: 11/22/21 10:00
Date Received: 11/24/21 10:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13362	12/01/21 08:45	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/01/21 15:42	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1635-1

Client Sample ID: FS14
Date Collected: 11/22/21 10:00
Date Received: 11/24/21 10:48

Lab Sample ID: 890-1635-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13730	12/02/21 11:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13825	12/03/21 12:19	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		10	14366	12/09/21 18:56	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: 890-1635-1
Project/Site: PLU 293 Flow Line

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 293 Flow Line

Job ID: 890-1635-1

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 293 Flow Line

Job ID: 890-1635-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1635-1	FS15	Solid	11/22/21 16:10	11/24/21 10:48	0.5
890-1635-2	FS16	Solid	11/22/21 16:00	11/24/21 10:48	0.5
890-1635-3	FS17	Solid	11/22/21 16:05	11/24/21 10:48	0.5
890-1635-4	FS14	Solid	11/22/21 10:00	11/24/21 10:48	0.5

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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)

www.xenco.com Page 1 of 1

Work Order No: _____

12/10/2021

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA Inc.	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:	conner.shore@wsp.com; tacoma.morrissey@wsp.com

Work Order Comments

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

Project Name:	PLU 293 Flow Line	Turn Around	
Project Number:		Routine	☑
P.O. Number:	CC: 1139243001	Rush:	
Sampler's Name:	Conner Shore	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):	1.4 / 1.2	Thermometer ID	TMN007	
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

890-1635 Chain of Custody

Work Order Notes

Incident #: NAPP2126045826

API:30-015-34877

(Poker Lake Unit #261)

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 0=8021)	Chloride (EPA 300.0)	Sample Comments
FS15	s	11/22/2021	16:10	0.5	1	x	x	x	Composite
FS16	s	11/22/2021	16:00	0.5	1	x	x	x	Composite
FS17	s	11/22/2021	16:05	0.5	1	x	x	x	Composite
~~FS14~~	s	~~11/22/2021~~	~~10:00~~	0.5	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 CSa		11-24-21 1048	2		
3			4		
5			6		

Revised Date 051418 Rev 2018 1

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Received by OCD: 6/27/2022 11:07:42 AM

Released to Imaging: 9/22/2022 12:11:24 PM

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: 890-523 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 #: 890-1635-1
Address: 1211 W Florida Ave	Due Date Requested: 12/3/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: PLU 293 Flow Line	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:		X	X							
FS15 (890-1635-1)	11/22/21	16 10 Mountain		Solid			X	X	X	X	X	1	
FS16 (890-1635-2)	11/22/21	16 00 Mountain		Solid			X	X	X	X	X	1	
FS17 (890-1635-3)	11/22/21	16 05 Mountain		Solid			X	X	X	X	X	1	
FS14 (890-1635-4)	11/22/21	10 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
1	N-Dan	11/29/21		J Kramer	11.29.21	
2	Relinquished by	Date/Time	Company	Received by	Date/Time 230	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: 3.2/3.3

Ver: 06/08/2021

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Received by OCD: 6/27/2022 11:07:42 AM
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12/10/2021
Released to Imaging: 9/22/2022 12:11:24 PM

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1635-1
SDG Number:

Login Number: 1635
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: 890-1635-1
SDG Number:

Login Number: 1635
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland
List Creation: 11/29/21 02:35 PM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-1637-1
Client Project/Site: PLU 293 Flow Line
Revision: 1

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
1/20/2022 3:02:29 PM

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

LINKS
Review your project results through TotalAccess
Have a Question? Ask The Expert
Visit us at: www.eurofinsus.com/Env

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 293 Flow Line

Laboratory Job ID: 890-1637-1

Table of Contents

Definitions/Glossary

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

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
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 293 Flow Line

Job ID: 890-1637-1

Job ID: 890-1637-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-1637-1

REVISION

The report being provided is a revision of the original report sent on 12/10/2021. The report (revision 1) is being revised due to Per client email, Corrected sample depths for FS08-FS13 to 4'.

Report revision history

Receipt
The samples were received on 11/24/2021 10:43 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 1.2°C

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: FS08 (890-1637-1), FS09 (890-1637-2), FS10 (890-1637-3), FS11 (890-1637-4), FS12 (890-1637-5), FS13 (890-1637-6), FS18 (890-1637-7), FS19 (890-1637-8), FS20 (890-1637-9), FS21 (890-1637-10), FS22 (890-1637-11), FS23 (890-1637-12), FS24 (890-1637-13), FS26 (890-1637-15) and FS28 (890-1637-17). 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 sample size used in the preparation of the matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 880-13750 and analytical batch 880-13827 was outside the 10% difference. As the relative percent difference (RPD) calculation is based upon the MS/MSD concentration as opposed to the MS/MSD percent recovery, elevated %RPD values were obtained.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCSD 880-13750/3-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
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 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS08

Date Collected: 11/23/21 09:00
Date Received: 11/24/21 10:43
Sample Depth: 4

Lab Sample ID: 890-1637-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 03:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 03:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 03:54	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/30/21 10:13	12/02/21 03:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 03:54	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/30/21 10:13	12/02/21 03:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*164*	*S1+*	*70 - 130*	*11/30/21 10:13*	*12/02/21 03:54*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*11/30/21 10:13*	*12/02/21 03:54*	*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			12/03/21 10:31	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			12/06/21 15:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 12:19	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 12:19	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 12:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*12/02/21 14:16*	*12/03/21 12:19*	*1*
o-Terphenyl	*90*		*70 - 130*	*12/02/21 14:16*	*12/03/21 12:19*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1330**		5.00		mg/Kg			12/09/21 19:04	1

Client Sample ID: FS09

Date Collected: 11/23/21 09:05
Date Received: 11/24/21 10:43
Sample Depth: 4

Lab Sample ID: 890-1637-2
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		11/30/21 10:13	12/02/21 04:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 04:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 04:20	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		11/30/21 10:13	12/02/21 04:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 04:20	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		11/30/21 10:13	12/02/21 04:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*162*	*S1+*	*70 - 130*	*11/30/21 10:13*	*12/02/21 04:20*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS09

Date Collected: 11/23/21 09:05
Date Received: 11/24/21 10:43
Sample Depth: 4

Lab Sample ID: 890-1637-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*11/30/21 10:13*	*12/02/21 04:20*	*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			12/03/21 10:31	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			12/06/21 15:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		12/02/21 14:16	12/03/21 12:40	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		12/02/21 14:16	12/03/21 12:40	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		12/02/21 14:16	12/03/21 12:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*12/02/21 14:16*	*12/03/21 12:40*	*1*
o-Terphenyl	*96*		*70 - 130*	*12/02/21 14:16*	*12/03/21 12:40*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**103**		4.95		mg/Kg			12/09/21 19:13	1

Client Sample ID: FS10

Date Collected: 11/23/21 09:10
Date Received: 11/24/21 10:43
Sample Depth: 4

Lab Sample ID: 890-1637-3
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		11/30/21 10:13	12/02/21 04:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 04:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 04:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/30/21 10:13	12/02/21 04:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 04:46	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/30/21 10:13	12/02/21 04:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*162*	*S1+*	*70 - 130*	*11/30/21 10:13*	*12/02/21 04:46*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*11/30/21 10:13*	*12/02/21 04:46*	*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			12/03/21 10:31	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			12/06/21 15:44	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS10

Date Collected: 11/23/21 09:10
Date Received: 11/24/21 10:43
Sample Depth: 4

Lab Sample ID: 890-1637-3
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	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 13:01	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 13:01	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 13:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*12/02/21 14:16*	*12/03/21 13:01*	*1*
o-Terphenyl	*87*		*70 - 130*	*12/02/21 14:16*	*12/03/21 13:01*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**290**		5.02		mg/Kg			12/09/21 19:38	1

Client Sample ID: FS11

Date Collected: 11/23/21 09:15
Date Received: 11/24/21 10:43
Sample Depth: 4

Lab Sample ID: 890-1637-4
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		11/30/21 10:13	12/02/21 05:11	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/30/21 10:13	12/02/21 05:11	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/30/21 10:13	12/02/21 05:11	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/30/21 10:13	12/02/21 05:11	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/30/21 10:13	12/02/21 05:11	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/30/21 10:13	12/02/21 05:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*164*	*S1+*	*70 - 130*	*11/30/21 10:13*	*12/02/21 05:11*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*11/30/21 10:13*	*12/02/21 05:11*	*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			12/03/21 10:31	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			12/06/21 15:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		12/02/21 14:16	12/03/21 13:22	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		12/02/21 14:16	12/03/21 13:22	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		12/02/21 14:16	12/03/21 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*81*		*70 - 130*	*12/02/21 14:16*	*12/03/21 13:22*	*1*
o-Terphenyl	*88*		*70 - 130*	*12/02/21 14:16*	*12/03/21 13:22*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS11

Lab Sample ID: 890-1637-4
Matrix: Solid
Date Collected: 11/23/21 09:15
Date Received: 11/24/21 10:43
Sample Depth: 4

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	351		4.97		mg/Kg			12/09/21 19:46	1

Client Sample ID: FS12

Lab Sample ID: 890-1637-5
Matrix: Solid
Date Collected: 11/23/21 09:55
Date Received: 11/24/21 10:43
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		11/30/21 10:13	12/02/21 05:37	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/30/21 10:13	12/02/21 05:37	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/30/21 10:13	12/02/21 05:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/30/21 10:13	12/02/21 05:37	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/30/21 10:13	12/02/21 05:37	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/30/21 10:13	12/02/21 05:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*156*	*S1+*	*70 - 130*	*11/30/21 10:13*	*12/02/21 05:37*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*11/30/21 10:13*	*12/02/21 05:37*	*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			12/03/21 10:31	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			12/06/21 15:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/02/21 14:16	12/03/21 13:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/02/21 14:16	12/03/21 13:42	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/02/21 14:16	12/03/21 13:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*77*		*70 - 130*	*12/02/21 14:16*	*12/03/21 13:42*	*1*
o-Terphenyl	*83*		*70 - 130*	*12/02/21 14:16*	*12/03/21 13:42*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	73.8		4.95		mg/Kg			12/09/21 19:54	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS13

Date Collected: 11/23/21 15:43
Date Received: 11/24/21 10:43
Sample Depth: 4

Lab Sample ID: 890-1637-6
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		11/30/21 10:13	12/02/21 06:03	1
Toluene	<0.00198	U	0.00198		mg/Kg		11/30/21 10:13	12/02/21 06:03	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		11/30/21 10:13	12/02/21 06:03	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		11/30/21 10:13	12/02/21 06:03	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		11/30/21 10:13	12/02/21 06:03	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		11/30/21 10:13	12/02/21 06:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*157*	*S1+*	*70 - 130*	*11/30/21 10:13*	*12/02/21 06:03*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*11/30/21 10:13*	*12/02/21 06:03*	*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			12/03/21 10:31	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			12/06/21 15:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 14:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 14:03	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 14:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*12/02/21 14:16*	*12/03/21 14:03*	*1*
o-Terphenyl	*94*		*70 - 130*	*12/02/21 14:16*	*12/03/21 14:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**95.3**		4.99		mg/Kg			12/09/21 20:03	1

Client Sample ID: FS18

Date Collected: 11/23/21 13:30
Date Received: 11/24/21 10:43
Sample Depth: 0.5

Lab Sample ID: 890-1637-7
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		11/30/21 10:13	12/02/21 06:28	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/30/21 10:13	12/02/21 06:28	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/30/21 10:13	12/02/21 06:28	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/30/21 10:13	12/02/21 06:28	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/30/21 10:13	12/02/21 06:28	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/30/21 10:13	12/02/21 06:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*169*	*S1+*	*70 - 130*	*11/30/21 10:13*	*12/02/21 06:28*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS18

Date Collected: 11/23/21 13:30
Date Received: 11/24/21 10:43
Sample Depth: 0.5

Lab Sample ID: 890-1637-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*122*		*70 - 130*	*11/30/21 10:13*	*12/02/21 06:28*	*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			12/03/21 10:31	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**60.9**		50.0	mg/Kg			12/06/21 15:44	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/02/21 14:16	12/03/21 14:24	1
Diesel Range Organics (Over C10-C28)	**60.9**		50.0	mg/Kg		12/02/21 14:16	12/03/21 14:24	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/02/21 14:16	12/03/21 14:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*12/02/21 14:16*	*12/03/21 14:24*	*1*
o-Terphenyl	*95*		*70 - 130*	*12/02/21 14:16*	*12/03/21 14:24*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3460**		25.0	mg/Kg			12/09/21 20:11	5

Client Sample ID: FS19

Date Collected: 11/23/21 13:35
Date Received: 11/24/21 10:43
Sample Depth: 0.5

Lab Sample ID: 890-1637-8
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		11/30/21 10:13	12/02/21 06:55	1
Toluene	<0.00202	U	0.00202	mg/Kg		11/30/21 10:13	12/02/21 06:55	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		11/30/21 10:13	12/02/21 06:55	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		11/30/21 10:13	12/02/21 06:55	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		11/30/21 10:13	12/02/21 06:55	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		11/30/21 10:13	12/02/21 06:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*152*	*S1+*	*70 - 130*	*11/30/21 10:13*	*12/02/21 06:55*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*11/30/21 10:13*	*12/02/21 06:55*	*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			12/03/21 10:31	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			12/06/21 15:44	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS19

Lab Sample ID: 890-1637-8
Matrix: Solid
Date Collected: 11/23/21 13:35
Date Received: 11/24/21 10:43
Sample Depth: 0.5

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		12/02/21 14:16	12/03/21 15:06	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 15:06	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 15:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*12/02/21 14:16*	*12/03/21 15:06*	*1*
o-Terphenyl	*95*		*70 - 130*	*12/02/21 14:16*	*12/03/21 15:06*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**972**		4.96		mg/Kg			12/09/21 20:19	1

Client Sample ID: FS20

Lab Sample ID: 890-1637-9
Matrix: Solid
Date Collected: 11/23/21 13:40
Date Received: 11/24/21 10:43
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 07:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 07:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 07:20	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/30/21 10:13	12/02/21 07:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 07:20	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/30/21 10:13	12/02/21 07:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*169*	*S1+*	*70 - 130*	*11/30/21 10:13*	*12/02/21 07:20*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*11/30/21 10:13*	*12/02/21 07:20*	*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			12/03/21 10:31	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			12/06/21 15:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/02/21 14:16	12/03/21 15:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/02/21 14:16	12/03/21 15:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/02/21 14:16	12/03/21 15:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*12/02/21 14:16*	*12/03/21 15:28*	*1*
o-Terphenyl	*91*		*70 - 130*	*12/02/21 14:16*	*12/03/21 15:28*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS20

Lab Sample ID: 890-1637-9
Matrix: Solid
Date Collected: 11/23/21 13:40
Date Received: 11/24/21 10:43
Sample Depth: 0.5

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3230**		25.2		mg/Kg			12/09/21 20:45	5

Client Sample ID: FS21

Lab Sample ID: 890-1637-10
Matrix: Solid
Date Collected: 11/23/21 13:45
Date Received: 11/24/21 10:43
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 07:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 07:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 07:46	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		11/30/21 10:13	12/02/21 07:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 07:46	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		11/30/21 10:13	12/02/21 07:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*156*	*S1+*	*70 - 130*	*11/30/21 10:13*	*12/02/21 07:46*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*11/30/21 10:13*	*12/02/21 07:46*	*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			12/03/21 10:31	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**53.9**		49.9		mg/Kg			12/06/21 15:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 15:48	1
Diesel Range Organics (Over C10-C28)	**53.9**		49.9		mg/Kg		12/02/21 14:16	12/03/21 15:48	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 15:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*12/02/21 14:16*	*12/03/21 15:48*	*1*
o-Terphenyl	*96*		*70 - 130*	*12/02/21 14:16*	*12/03/21 15:48*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1040**		24.9		mg/Kg			12/09/21 20:53	5

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS22
Date Collected: 11/23/21 14:15
Date Received: 11/24/21 10:43
Sample Depth: 0.5

Lab Sample ID: 890-1637-11
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		11/30/21 10:13	12/02/21 09:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 09:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 09:33	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/30/21 10:13	12/02/21 09:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 09:33	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/30/21 10:13	12/02/21 09:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*176*	*S1+*	*70 - 130*	*11/30/21 10:13*	*12/02/21 09:33*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*11/30/21 10:13*	*12/02/21 09:33*	*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			12/03/21 10:31	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			12/06/21 15:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/02/21 14:16	12/03/21 16:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/02/21 14:16	12/03/21 16:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/02/21 14:16	12/03/21 16:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*12/02/21 14:16*	*12/03/21 16:10*	*1*
o-Terphenyl	*103*		*70 - 130*	*12/02/21 14:16*	*12/03/21 16:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**345**		4.95		mg/Kg			12/09/21 21:18	1

Client Sample ID: FS23
Date Collected: 11/23/21 14:20
Date Received: 11/24/21 10:43
Sample Depth: 0.5

Lab Sample ID: 890-1637-12
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		11/30/21 10:13	12/02/21 09:59	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/30/21 10:13	12/02/21 09:59	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/30/21 10:13	12/02/21 09:59	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/30/21 10:13	12/02/21 09:59	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/30/21 10:13	12/02/21 09:59	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/30/21 10:13	12/02/21 09:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*137*	*S1+*	*70 - 130*	*11/30/21 10:13*	*12/02/21 09:59*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS23

Date Collected: 11/23/21 14:20
Date Received: 11/24/21 10:43
Sample Depth: 0.5

Lab Sample ID: 890-1637-12
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*11/30/21 10:13*	*12/02/21 09:59*	*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			12/03/21 10:31	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			12/06/21 15:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		12/02/21 14:16	12/03/21 16:31	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		12/02/21 14:16	12/03/21 16:31	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		12/02/21 14:16	12/03/21 16:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*12/02/21 14:16*	*12/03/21 16:31*	*1*
o-Terphenyl	*103*		*70 - 130*	*12/02/21 14:16*	*12/03/21 16:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**788**		5.01		mg/Kg			12/09/21 21:26	1

Client Sample ID: FS24

Date Collected: 11/23/21 14:25
Date Received: 11/24/21 10:43
Sample Depth: 0.5

Lab Sample ID: 890-1637-13
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/30/21 10:13	12/02/21 10:25	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/30/21 10:13	12/02/21 10:25	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/30/21 10:13	12/02/21 10:25	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/30/21 10:13	12/02/21 10:25	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/30/21 10:13	12/02/21 10:25	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/30/21 10:13	12/02/21 10:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*158*	*S1+*	*70 - 130*	*11/30/21 10:13*	*12/02/21 10:25*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*11/30/21 10:13*	*12/02/21 10:25*	*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			12/03/21 10:31	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			12/06/21 15:44	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS24

Lab Sample ID: 890-1637-13
Matrix: Solid
Date Collected: 11/23/21 14:25
Date Received: 11/24/21 10:43
Sample Depth: 0.5

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		12/02/21 14:16	12/03/21 16:52	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 16:52	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 16:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*12/02/21 14:16*	*12/03/21 16:52*	*1*
o-Terphenyl	*101*		*70 - 130*	*12/02/21 14:16*	*12/03/21 16:52*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**616**		4.97		mg/Kg			12/09/21 21:35	1

Client Sample ID: FS25

Lab Sample ID: 890-1637-14
Matrix: Solid
Date Collected: 11/23/21 14:30
Date Received: 11/24/21 10:43
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 10:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 10:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 10:51	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		11/30/21 10:13	12/02/21 10:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 10:51	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		11/30/21 10:13	12/02/21 10:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*11/30/21 10:13*	*12/02/21 10:51*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*11/30/21 10:13*	*12/02/21 10:51*	*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			12/03/21 10:31	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			12/06/21 15:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 17:13	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 17:13	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/02/21 14:16	12/03/21 17:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*12/02/21 14:16*	*12/03/21 17:13*	*1*
o-Terphenyl	*101*		*70 - 130*	*12/02/21 14:16*	*12/03/21 17:13*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS25

Lab Sample ID: 890-1637-14
Matrix: Solid
Date Collected: 11/23/21 14:30
Date Received: 11/24/21 10:43
Sample Depth: 0.5

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1120**		5.00		mg/Kg			12/09/21 21:43	1

Client Sample ID: FS26

Lab Sample ID: 890-1637-15
Matrix: Solid
Date Collected: 11/23/21 15:50
Date Received: 11/24/21 10:43
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		11/30/21 10:13	12/02/21 11:18	1
Toluene	<0.00202	U	0.00202		mg/Kg		11/30/21 10:13	12/02/21 11:18	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		11/30/21 10:13	12/02/21 11:18	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		11/30/21 10:13	12/02/21 11:18	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		11/30/21 10:13	12/02/21 11:18	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		11/30/21 10:13	12/02/21 11:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*160*	*S1+*	*70 - 130*	*11/30/21 10:13*	*12/02/21 11:18*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*11/30/21 10:13*	*12/02/21 11:18*	*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			12/03/21 10:31	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**60.6**		50.0		mg/Kg			12/06/21 15:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/02/21 14:16	12/03/21 17:34	1
Diesel Range Organics (Over C10-C28)	**60.6**		50.0		mg/Kg		12/02/21 14:16	12/03/21 17:34	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/02/21 14:16	12/03/21 17:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*12/02/21 14:16*	*12/03/21 17:34*	*1*
o-Terphenyl	*103*		*70 - 130*	*12/02/21 14:16*	*12/03/21 17:34*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1470**		5.00		mg/Kg			12/09/21 21:52	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS27
Date Collected: 11/23/21 15:55
Date Received: 11/24/21 10:43
Sample Depth: 0.5

Lab Sample ID: 890-1637-16
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/30/21 10:13	12/02/21 11:44	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/30/21 10:13	12/02/21 11:44	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/30/21 10:13	12/02/21 11:44	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/30/21 10:13	12/02/21 11:44	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/30/21 10:13	12/02/21 11:44	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/30/21 10:13	12/02/21 11:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*11/30/21 10:13*	*12/02/21 11:44*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*11/30/21 10:13*	*12/02/21 11:44*	*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			12/03/21 10:31	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			12/06/21 15:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/02/21 14:16	12/03/21 17:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/02/21 14:16	12/03/21 17:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/02/21 14:16	12/03/21 17:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*12/02/21 14:16*	*12/03/21 17:55*	*1*
o-Terphenyl	*99*		*70 - 130*	*12/02/21 14:16*	*12/03/21 17:55*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1070**		5.03		mg/Kg			12/09/21 22:00	1

Client Sample ID: FS28
Date Collected: 11/23/21 16:00
Date Received: 11/24/21 10:43
Sample Depth: 0.5

Lab Sample ID: 890-1637-17
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/30/21 10:13	12/02/21 12:10	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/30/21 10:13	12/02/21 12:10	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/30/21 10:13	12/02/21 12:10	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/30/21 10:13	12/02/21 12:10	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/30/21 10:13	12/02/21 12:10	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/30/21 10:13	12/02/21 12:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*156*	*S1+*	*70 - 130*	*11/30/21 10:13*	*12/02/21 12:10*	*1*

Eurofins Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS28
Date Collected: 11/23/21 16:00
Date Received: 11/24/21 10:43
Sample Depth: 0.5

Lab Sample ID: 890-1637-17
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*11/30/21 10:13*	*12/02/21 12:10*	*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			12/03/21 10:44	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			12/06/21 15:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		12/02/21 14:16	12/03/21 18:16	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		12/02/21 14:16	12/03/21 18:16	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		12/02/21 14:16	12/03/21 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*12/02/21 14:16*	*12/03/21 18:16*	*1*
o-Terphenyl	*122*		*70 - 130*	*12/02/21 14:16*	*12/03/21 18:16*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**157**		5.04		mg/Kg			12/09/21 22:08	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

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)
890-1637-1	FS08	164 S1+	95
890-1637-1 MS	FS08	153 S1+	119
890-1637-1 MSD	FS08	148 S1+	136 S1+
890-1637-2	FS09	162 S1+	113
890-1637-3	FS10	162 S1+	115
890-1637-4	FS11	164 S1+	111
890-1637-5	FS12	156 S1+	111
890-1637-6	FS13	157 S1+	113
890-1637-7	FS18	169 S1+	122
890-1637-8	FS19	152 S1+	115
890-1637-9	FS20	169 S1+	115
890-1637-10	FS21	156 S1+	113
890-1637-11	FS22	176 S1+	95
890-1637-12	FS23	137 S1+	105
890-1637-13	FS24	158 S1+	116
890-1637-14	FS25	128	97
890-1637-15	FS26	160 S1+	113
890-1637-16	FS27	76	72
890-1637-17	FS28	156 S1+	114
LCS 880-13445/1-A	Lab Control Sample	135 S1+	117
LCSD 880-13445/2-A	Lab Control Sample Dup	145 S1+	122
MB 880-13362/5-A	Method Blank	85	104
MB 880-13445/5-A	Method Blank	88	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)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-1634-A-1-G MS	Matrix Spike	110	112
890-1634-A-1-H MSD	Matrix Spike Duplicate	94	89
890-1637-1	FS08	86	90
890-1637-2	FS09	92	96
890-1637-3	FS10	82	87
890-1637-4	FS11	81	88
890-1637-5	FS12	77	83
890-1637-6	FS13	84	94
890-1637-7	FS18	89	95
890-1637-8	FS19	93	95
890-1637-9	FS20	85	91
890-1637-10	FS21	90	96
890-1637-11	FS22	95	103
890-1637-12	FS23	96	103
890-1637-13	FS24	91	101
890-1637-14	FS25	91	101

Surrogate Summary

Client: WSP USA Inc. Job ID: 890-1637-1
Project/Site: PLU 293 Flow Line

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)								
890-1637-15	FS26	94	103								
890-1637-16	FS27	89	99								
890-1637-17	FS28	105	122								
LCS 880-13750/2-A	Lab Control Sample	93	91								
LCSD 880-13750/3-A	Lab Control Sample Dup	130	131 S1+								
MB 880-13750/1-A	Method Blank	81	93								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-13362/5-A
Matrix: Solid
Analysis Batch: 13606

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 13362

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 13:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 13:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 13:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/01/21 08:45	12/01/21 13:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/01/21 08:45	12/01/21 13:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/01/21 08:45	12/01/21 13:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*12/01/21 08:45*	*12/01/21 13:56*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*12/01/21 08:45*	*12/01/21 13:56*	*1*

Lab Sample ID: MB 880-13445/5-A
Matrix: Solid
Analysis Batch: 13606

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 13445

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 03:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 03:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 03:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/30/21 10:13	12/02/21 03:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/30/21 10:13	12/02/21 03:28	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/30/21 10:13	12/02/21 03:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*11/30/21 10:13*	*12/02/21 03:28*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*11/30/21 10:13*	*12/02/21 03:28*	*1*

Lab Sample ID: LCS 880-13445/1-A
Matrix: Solid
Analysis Batch: 13606

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 13445

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1064		mg/Kg		106	70 - 130		
Toluene			0.100	0.1095		mg/Kg		110	70 - 130		
Ethylbenzene			0.100	0.1099		mg/Kg		110	70 - 130		
m-Xylene & p-Xylene			0.200	0.2453		mg/Kg		123	70 - 130		
o-Xylene			0.100	0.1167		mg/Kg		117	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*135*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*

Lab Sample ID: LCSD 880-13445/2-A
Matrix: Solid
Analysis Batch: 13606

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 13445

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1070		mg/Kg		107	70 - 130	1	35

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

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

Lab Sample ID: LCSD 880-13445/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 13606 — **Prep Batch: 13445**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.1108		mg/Kg		111	70 - 130	1	35
Ethylbenzene			0.100	0.1083		mg/Kg		108	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2385		mg/Kg		119	70 - 130	3	35
o-Xylene			0.100	0.1156		mg/Kg		116	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*145*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*122*		*70 - 130*

Lab Sample ID: 890-1637-1 MS — **Client Sample ID: FS08**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 13606 — **Prep Batch: 13445**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.0998	0.08973		mg/Kg		90	70 - 130
Toluene	<0.00200	U	0.0998	0.1007		mg/Kg		101	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.09660		mg/Kg		97	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1977		mg/Kg		99	70 - 130
o-Xylene	<0.00200	U	0.0998	0.1020		mg/Kg		102	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*153*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*119*		*70 - 130*

Lab Sample ID: 890-1637-1 MSD — **Client Sample ID: FS08**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 13606 — **Prep Batch: 13445**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0990	0.07902		mg/Kg		80	70 - 130	13	35
Toluene	<0.00200	U	0.0990	0.09001		mg/Kg		91	70 - 130	11	35
Ethylbenzene	<0.00200	U	0.0990	0.08820		mg/Kg		89	70 - 130	9	35
m-Xylene & p-Xylene	<0.00399	U	0.198	0.1889		mg/Kg		95	70 - 130	5	35
o-Xylene	<0.00200	U	0.0990	0.09484		mg/Kg		96	70 - 130	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*148*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*136*	*S1+*	*70 - 130*

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

Lab Sample ID: MB 880-13750/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 13827 — **Prep Batch: 13750**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/02/21 14:16	12/03/21 09:30	1

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

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

Lab Sample ID: MB 880-13750/1-A
Matrix: Solid
Analysis Batch: 13827

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 13750

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/02/21 14:16	12/03/21 09:30	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/02/21 14:16	12/03/21 09:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*81*		*70 - 130*	*12/02/21 14:16*	*12/03/21 09:30*	*1*
o-Terphenyl	*93*		*70 - 130*	*12/02/21 14:16*	*12/03/21 09:30*	*1*

Lab Sample ID: LCS 880-13750/2-A
Matrix: Solid
Analysis Batch: 13827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 13750

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	938.9		mg/Kg		94	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	910.1		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*91*		*70 - 130*

Lab Sample ID: LCSD 880-13750/3-A
Matrix: Solid
Analysis Batch: 13827

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 13750

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	948.6		mg/Kg		95	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	959.9		mg/Kg		96	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*130*		*70 - 130*
o-Terphenyl	*131*	*S1+*	*70 - 130*

Lab Sample ID: 890-1634-A-1-G MS
Matrix: Solid
Analysis Batch: 13827

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 13750

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 F2	997	1387	F1	mg/Kg		139	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1119		mg/Kg		111	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*110*		*70 - 130*
o-Terphenyl	*112*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

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

Lab Sample ID: 890-1634-A-1-H MSD
Matrix: Solid
Analysis Batch: 13827

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 13750

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 F2	999	1089	F2	mg/Kg		109	70 - 130	24	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	916.7		mg/Kg		90	70 - 130	20	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*94*		*70 - 130*
o-Terphenyl	*89*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-13649/1-A
Matrix: Solid
Analysis Batch: 14366

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			12/09/21 17:57	1

Lab Sample ID: LCS 880-13649/2-A
Matrix: Solid
Analysis Batch: 14366

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	257.8		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-13649/3-A
Matrix: Solid
Analysis Batch: 14366

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	256.7		mg/Kg		103	90 - 110	0	20

Lab Sample ID: 890-1637-8 MS
Matrix: Solid
Analysis Batch: 14366

Client Sample ID: FS19
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	972		248	1215		mg/Kg		98	90 - 110		

Lab Sample ID: 890-1637-8 MSD
Matrix: Solid
Analysis Batch: 14366

Client Sample ID: FS19
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	972		248	1202		mg/Kg		93	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

GC VOA

Prep Batch: 13362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-13362/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 13445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1637-1	FS08	Total/NA	Solid	5035	
890-1637-2	FS09	Total/NA	Solid	5035	
890-1637-3	FS10	Total/NA	Solid	5035	
890-1637-4	FS11	Total/NA	Solid	5035	
890-1637-5	FS12	Total/NA	Solid	5035	
890-1637-6	FS13	Total/NA	Solid	5035	
890-1637-7	FS18	Total/NA	Solid	5035	
890-1637-8	FS19	Total/NA	Solid	5035	
890-1637-9	FS20	Total/NA	Solid	5035	
890-1637-10	FS21	Total/NA	Solid	5035	
890-1637-11	FS22	Total/NA	Solid	5035	
890-1637-12	FS23	Total/NA	Solid	5035	
890-1637-13	FS24	Total/NA	Solid	5035	
890-1637-14	FS25	Total/NA	Solid	5035	
890-1637-15	FS26	Total/NA	Solid	5035	
890-1637-16	FS27	Total/NA	Solid	5035	
890-1637-17	FS28	Total/NA	Solid	5035	
MB 880-13445/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-13445/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-13445/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1637-1 MS	FS08	Total/NA	Solid	5035	
890-1637-1 MSD	FS08	Total/NA	Solid	5035	

Analysis Batch: 13606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1637-1	FS08	Total/NA	Solid	8021B	13445
890-1637-2	FS09	Total/NA	Solid	8021B	13445
890-1637-3	FS10	Total/NA	Solid	8021B	13445
890-1637-4	FS11	Total/NA	Solid	8021B	13445
890-1637-5	FS12	Total/NA	Solid	8021B	13445
890-1637-6	FS13	Total/NA	Solid	8021B	13445
890-1637-7	FS18	Total/NA	Solid	8021B	13445
890-1637-8	FS19	Total/NA	Solid	8021B	13445
890-1637-9	FS20	Total/NA	Solid	8021B	13445
890-1637-10	FS21	Total/NA	Solid	8021B	13445
890-1637-11	FS22	Total/NA	Solid	8021B	13445
890-1637-12	FS23	Total/NA	Solid	8021B	13445
890-1637-13	FS24	Total/NA	Solid	8021B	13445
890-1637-14	FS25	Total/NA	Solid	8021B	13445
890-1637-15	FS26	Total/NA	Solid	8021B	13445
890-1637-16	FS27	Total/NA	Solid	8021B	13445
890-1637-17	FS28	Total/NA	Solid	8021B	13445
MB 880-13362/5-A	Method Blank	Total/NA	Solid	8021B	13362
MB 880-13445/5-A	Method Blank	Total/NA	Solid	8021B	13445
LCS 880-13445/1-A	Lab Control Sample	Total/NA	Solid	8021B	13445
LCSD 880-13445/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	13445
890-1637-1 MS	FS08	Total/NA	Solid	8021B	13445

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

GC VOA (Continued)

Analysis Batch: 13606 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1637-1 MSD	FS08	Total/NA	Solid	8021B	13445

Analysis Batch: 13868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1637-1	FS08	Total/NA	Solid	Total BTEX	
890-1637-2	FS09	Total/NA	Solid	Total BTEX	
890-1637-3	FS10	Total/NA	Solid	Total BTEX	
890-1637-4	FS11	Total/NA	Solid	Total BTEX	
890-1637-5	FS12	Total/NA	Solid	Total BTEX	
890-1637-6	FS13	Total/NA	Solid	Total BTEX	
890-1637-7	FS18	Total/NA	Solid	Total BTEX	
890-1637-8	FS19	Total/NA	Solid	Total BTEX	
890-1637-9	FS20	Total/NA	Solid	Total BTEX	
890-1637-10	FS21	Total/NA	Solid	Total BTEX	
890-1637-11	FS22	Total/NA	Solid	Total BTEX	
890-1637-12	FS23	Total/NA	Solid	Total BTEX	
890-1637-13	FS24	Total/NA	Solid	Total BTEX	
890-1637-14	FS25	Total/NA	Solid	Total BTEX	
890-1637-15	FS26	Total/NA	Solid	Total BTEX	
890-1637-16	FS27	Total/NA	Solid	Total BTEX	
890-1637-17	FS28	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 13750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1637-1	FS08	Total/NA	Solid	8015NM Prep	
890-1637-2	FS09	Total/NA	Solid	8015NM Prep	
890-1637-3	FS10	Total/NA	Solid	8015NM Prep	
890-1637-4	FS11	Total/NA	Solid	8015NM Prep	
890-1637-5	FS12	Total/NA	Solid	8015NM Prep	
890-1637-6	FS13	Total/NA	Solid	8015NM Prep	
890-1637-7	FS18	Total/NA	Solid	8015NM Prep	
890-1637-8	FS19	Total/NA	Solid	8015NM Prep	
890-1637-9	FS20	Total/NA	Solid	8015NM Prep	
890-1637-10	FS21	Total/NA	Solid	8015NM Prep	
890-1637-11	FS22	Total/NA	Solid	8015NM Prep	
890-1637-12	FS23	Total/NA	Solid	8015NM Prep	
890-1637-13	FS24	Total/NA	Solid	8015NM Prep	
890-1637-14	FS25	Total/NA	Solid	8015NM Prep	
890-1637-15	FS26	Total/NA	Solid	8015NM Prep	
890-1637-16	FS27	Total/NA	Solid	8015NM Prep	
890-1637-17	FS28	Total/NA	Solid	8015NM Prep	
MB 880-13750/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-13750/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-13750/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1634-A-1-G MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1634-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

GC Semi VOA

Analysis Batch: 13827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1637-1	FS08	Total/NA	Solid	8015B NM	13750
890-1637-2	FS09	Total/NA	Solid	8015B NM	13750
890-1637-3	FS10	Total/NA	Solid	8015B NM	13750
890-1637-4	FS11	Total/NA	Solid	8015B NM	13750
890-1637-5	FS12	Total/NA	Solid	8015B NM	13750
890-1637-6	FS13	Total/NA	Solid	8015B NM	13750
890-1637-7	FS18	Total/NA	Solid	8015B NM	13750
890-1637-8	FS19	Total/NA	Solid	8015B NM	13750
890-1637-9	FS20	Total/NA	Solid	8015B NM	13750
890-1637-10	FS21	Total/NA	Solid	8015B NM	13750
890-1637-11	FS22	Total/NA	Solid	8015B NM	13750
890-1637-12	FS23	Total/NA	Solid	8015B NM	13750
890-1637-13	FS24	Total/NA	Solid	8015B NM	13750
890-1637-14	FS25	Total/NA	Solid	8015B NM	13750
890-1637-15	FS26	Total/NA	Solid	8015B NM	13750
890-1637-16	FS27	Total/NA	Solid	8015B NM	13750
890-1637-17	FS28	Total/NA	Solid	8015B NM	13750
MB 880-13750/1-A	Method Blank	Total/NA	Solid	8015B NM	13750
LCS 880-13750/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	13750
LCSD 880-13750/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	13750
890-1634-A-1-G MS	Matrix Spike	Total/NA	Solid	8015B NM	13750
890-1634-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	13750

Analysis Batch: 14112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1637-1	FS08	Total/NA	Solid	8015 NM	
890-1637-2	FS09	Total/NA	Solid	8015 NM	
890-1637-3	FS10	Total/NA	Solid	8015 NM	
890-1637-4	FS11	Total/NA	Solid	8015 NM	
890-1637-5	FS12	Total/NA	Solid	8015 NM	
890-1637-6	FS13	Total/NA	Solid	8015 NM	
890-1637-7	FS18	Total/NA	Solid	8015 NM	
890-1637-8	FS19	Total/NA	Solid	8015 NM	
890-1637-9	FS20	Total/NA	Solid	8015 NM	
890-1637-10	FS21	Total/NA	Solid	8015 NM	
890-1637-11	FS22	Total/NA	Solid	8015 NM	
890-1637-12	FS23	Total/NA	Solid	8015 NM	
890-1637-13	FS24	Total/NA	Solid	8015 NM	
890-1637-14	FS25	Total/NA	Solid	8015 NM	
890-1637-15	FS26	Total/NA	Solid	8015 NM	
890-1637-16	FS27	Total/NA	Solid	8015 NM	
890-1637-17	FS28	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 13649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1637-1	FS08	Soluble	Solid	DI Leach	
890-1637-2	FS09	Soluble	Solid	DI Leach	
890-1637-3	FS10	Soluble	Solid	DI Leach	
890-1637-4	FS11	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

HPLC/IC (Continued)

Leach Batch: 13649 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1637-5	FS12	Soluble	Solid	DI Leach	
890-1637-6	FS13	Soluble	Solid	DI Leach	
890-1637-7	FS18	Soluble	Solid	DI Leach	
890-1637-8	FS19	Soluble	Solid	DI Leach	
890-1637-9	FS20	Soluble	Solid	DI Leach	
890-1637-10	FS21	Soluble	Solid	DI Leach	
890-1637-11	FS22	Soluble	Solid	DI Leach	
890-1637-12	FS23	Soluble	Solid	DI Leach	
890-1637-13	FS24	Soluble	Solid	DI Leach	
890-1637-14	FS25	Soluble	Solid	DI Leach	
890-1637-15	FS26	Soluble	Solid	DI Leach	
890-1637-16	FS27	Soluble	Solid	DI Leach	
890-1637-17	FS28	Soluble	Solid	DI Leach	
MB 880-13649/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-13649/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-13649/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1637-8 MS	FS19	Soluble	Solid	DI Leach	
890-1637-8 MSD	FS19	Soluble	Solid	DI Leach	

Analysis Batch: 14366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1637-1	FS08	Soluble	Solid	300.0	13649
890-1637-2	FS09	Soluble	Solid	300.0	13649
890-1637-3	FS10	Soluble	Solid	300.0	13649
890-1637-4	FS11	Soluble	Solid	300.0	13649
890-1637-5	FS12	Soluble	Solid	300.0	13649
890-1637-6	FS13	Soluble	Solid	300.0	13649
890-1637-7	FS18	Soluble	Solid	300.0	13649
890-1637-8	FS19	Soluble	Solid	300.0	13649
890-1637-9	FS20	Soluble	Solid	300.0	13649
890-1637-10	FS21	Soluble	Solid	300.0	13649
890-1637-11	FS22	Soluble	Solid	300.0	13649
890-1637-12	FS23	Soluble	Solid	300.0	13649
890-1637-13	FS24	Soluble	Solid	300.0	13649
890-1637-14	FS25	Soluble	Solid	300.0	13649
890-1637-15	FS26	Soluble	Solid	300.0	13649
890-1637-16	FS27	Soluble	Solid	300.0	13649
890-1637-17	FS28	Soluble	Solid	300.0	13649
MB 880-13649/1-A	Method Blank	Soluble	Solid	300.0	13649
LCS 880-13649/2-A	Lab Control Sample	Soluble	Solid	300.0	13649
LCSD 880-13649/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	13649
890-1637-8 MS	FS19	Soluble	Solid	300.0	13649
890-1637-8 MSD	FS19	Soluble	Solid	300.0	13649

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS08
Date Collected: 11/23/21 09:00
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13445	11/30/21 10:13	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/02/21 03:54	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13750	12/02/21 14:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13827	12/03/21 12:19	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		1	14366	12/09/21 19:04	CH	XEN MID

Client Sample ID: FS09
Date Collected: 11/23/21 09:05
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13445	11/30/21 10:13	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/02/21 04:20	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13750	12/02/21 14:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13827	12/03/21 12:40	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		1	14366	12/09/21 19:13	CH	XEN MID

Client Sample ID: FS10
Date Collected: 11/23/21 09:10
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13445	11/30/21 10:13	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/02/21 04:46	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13750	12/02/21 14:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13827	12/03/21 13:01	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		1	14366	12/09/21 19:38	CH	XEN MID

Client Sample ID: FS11
Date Collected: 11/23/21 09:15
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13445	11/30/21 10:13	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/02/21 05:11	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS11
Date Collected: 11/23/21 09:15
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13750	12/02/21 14:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13827	12/03/21 13:22	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		1	14366	12/09/21 19:46	CH	XEN MID

Client Sample ID: FS12
Date Collected: 11/23/21 09:55
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13445	11/30/21 10:13	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/02/21 05:37	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13750	12/02/21 14:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13827	12/03/21 13:42	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		1	14366	12/09/21 19:54	CH	XEN MID

Client Sample ID: FS13
Date Collected: 11/23/21 15:43
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13445	11/30/21 10:13	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/02/21 06:03	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13750	12/02/21 14:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13827	12/03/21 14:03	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		1	14366	12/09/21 20:03	CH	XEN MID

Client Sample ID: FS18
Date Collected: 11/23/21 13:30
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13445	11/30/21 10:13	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/02/21 06:28	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13750	12/02/21 14:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13827	12/03/21 14:24	AJ	XEN MID

Eurofins Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS18
Date Collected: 11/23/21 13:30
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		5	14366	12/09/21 20:11	CH	XEN MID

Client Sample ID: FS19
Date Collected: 11/23/21 13:35
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13445	11/30/21 10:13	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/02/21 06:55	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13750	12/02/21 14:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13827	12/03/21 15:06	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		1	14366	12/09/21 20:19	CH	XEN MID

Client Sample ID: FS20
Date Collected: 11/23/21 13:40
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13445	11/30/21 10:13	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/02/21 07:20	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13750	12/02/21 14:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13827	12/03/21 15:28	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		5	14366	12/09/21 20:45	CH	XEN MID

Client Sample ID: FS21
Date Collected: 11/23/21 13:45
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13445	11/30/21 10:13	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/02/21 07:46	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13750	12/02/21 14:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13827	12/03/21 15:48	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		5	14366	12/09/21 20:53	CH	XEN MID

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS22
Date Collected: 11/23/21 14:15
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13445	11/30/21 10:13	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/02/21 09:33	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13750	12/02/21 14:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13827	12/03/21 16:10	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		1	14366	12/09/21 21:18	CH	XEN MID

Client Sample ID: FS23
Date Collected: 11/23/21 14:20
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13445	11/30/21 10:13	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/02/21 09:59	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13750	12/02/21 14:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13827	12/03/21 16:31	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		1	14366	12/09/21 21:26	CH	XEN MID

Client Sample ID: FS24
Date Collected: 11/23/21 14:25
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13445	11/30/21 10:13	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/02/21 10:25	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13750	12/02/21 14:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13827	12/03/21 16:52	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		1	14366	12/09/21 21:35	CH	XEN MID

Client Sample ID: FS25
Date Collected: 11/23/21 14:30
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13445	11/30/21 10:13	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/02/21 10:51	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS25
Date Collected: 11/23/21 14:30
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13750	12/02/21 14:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13827	12/03/21 17:13	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		1	14366	12/09/21 21:43	CH	XEN MID

Client Sample ID: FS26
Date Collected: 11/23/21 15:50
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13445	11/30/21 10:13	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/02/21 11:18	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13750	12/02/21 14:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13827	12/03/21 17:34	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		1	14366	12/09/21 21:52	CH	XEN MID

Client Sample ID: FS27
Date Collected: 11/23/21 15:55
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13445	11/30/21 10:13	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/02/21 11:44	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:31	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13750	12/02/21 14:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13827	12/03/21 17:55	AJ	XEN MID
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		1	14366	12/09/21 22:00	CH	XEN MID

Client Sample ID: FS28
Date Collected: 11/23/21 16:00
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			13445	11/30/21 10:13	KL	XEN MID
Total/NA	Analysis	8021B		1	13606	12/02/21 12:10	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	13868	12/03/21 10:44	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	14112	12/06/21 15:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			13750	12/02/21 14:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	13827	12/03/21 18:16	AJ	XEN MID

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Client Sample ID: FS28
Date Collected: 11/23/21 16:00
Date Received: 11/24/21 10:43

Lab Sample ID: 890-1637-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			13649	12/01/21 11:25	CA	XEN MID
Soluble	Analysis	300.0		1	14366	12/09/21 22:08	CH	XEN MID

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Job ID: 890-1637-1
Project/Site: PLU 293 Flow Line

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

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

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

Method Summary

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1637-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1637-1	FS08	Solid	11/23/21 09:00	11/24/21 10:43	4
890-1637-2	FS09	Solid	11/23/21 09:05	11/24/21 10:43	4
890-1637-3	FS10	Solid	11/23/21 09:10	11/24/21 10:43	4
890-1637-4	FS11	Solid	11/23/21 09:15	11/24/21 10:43	4
890-1637-5	FS12	Solid	11/23/21 09:55	11/24/21 10:43	4
890-1637-6	FS13	Solid	11/23/21 15:43	11/24/21 10:43	4
890-1637-7	FS18	Solid	11/23/21 13:30	11/24/21 10:43	0.5
890-1637-8	FS19	Solid	11/23/21 13:35	11/24/21 10:43	0.5
890-1637-9	FS20	Solid	11/23/21 13:40	11/24/21 10:43	0.5
890-1637-10	FS21	Solid	11/23/21 13:45	11/24/21 10:43	0.5
890-1637-11	FS22	Solid	11/23/21 14:15	11/24/21 10:43	0.5
890-1637-12	FS23	Solid	11/23/21 14:20	11/24/21 10:43	0.5
890-1637-13	FS24	Solid	11/23/21 14:25	11/24/21 10:43	0.5
890-1637-14	FS25	Solid	11/23/21 14:30	11/24/21 10:43	0.5
890-1637-15	FS26	Solid	11/23/21 15:50	11/24/21 10:43	0.5
890-1637-16	FS27	Solid	11/23/21 15:55	11/24/21 10:43	0.5
890-1637-17	FS28	Solid	11/23/21 16:00	11/24/21 10:43	0.5

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Chain of Custody

Work Order No: _____

XENCO LABORATORIES

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

1/20/2022 (Rev. 1)

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA Inc.	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:		conner.shore@wsp.com; tacoma.morrissey@wsp.com

Work Order Comments

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

Project Name:	PLU 293 Flow Line	Turn Around	
Project Number:		Routine	☑
P.O. Number:	CC: 1139243001	Rush:	
Sampler's Name:	Conner Shore	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	1.4/1.2	Thermometer ID	TNM-007	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
FS08	s	11/23/2021	900	0.5	1	x	x	x	Composite
FS09	s	11/23/2021	905	0.5	1	x	x	x	Composite
FS10	s	11/23/2021	910	0.5	1	x	x	x	Composite
~~FS11~~	~~s~~	~~11/23/2021~~	~~915~~	~~0.5~~	~~1~~	~~x~~	~~x~~	~~x~~	Composite
FS12	s	11/23/2021	955	0.5	1	x	x	x	Composite
FS13	s	11/23/2021	1543	0.5	1	x	x	x	Composite
FS18	s	11/23/2021	1330	0.5	1	x	x	x	Composite
FS19	s	11/23/2021	1335	0.5	1	x	x	x	Composite
FS20	s	11/23/2021	1340	0.5	1	x	x	x	Composite
FS21	s	11/23/2021	1345	0.5	1	x	x	x	Composite

890-1637 Chain of Custody

Work Order Notes

Incident #: NAPP2126045826

API:30-015-34877

(Poker Lake Unit #261)

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

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		11.24.21 1043	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Received by OCD: 6/27/2022 11:07:42 AM

Released to Imaging: 9/22/2022 12:11:24 PM

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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 2 of 2

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA Inc.	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:		conner.shore@wsp.com; tacoma.morrissey@wsp.com

Work Order Comments

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

Project Name:	PLU 293 Flow Line	Turn Around	
Project Number:		Routine	☑
P.O. Number:	CC: 1139243001	Rush:	
Sampler's Name:	Conner Shore	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):		Thermometer ID		
Received Intact:	Yes No			
Cooler Custody Seals:	Yes No N/A	Correction Factor:		
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)	Sample Comments
FS22	s	11/23/2021	1415	0.5	1	x	x	x	Composite
FS23	s	11/23/2021	1420	0.5	1	x	x	x	Composite
FS24	s	11/23/2021	1425	0.5	1	x	x	x	Composite
~~FS25~~	~~s~~	~~11/23/2021~~	~~1430~~	~~0.5~~	~~1~~	~~x~~	~~x~~	~~x~~	Composite
FS26	s	11/23/2021	1550	0.5	1	x	x	x	Composite
FS27	s	11/23/2021	1555	0.5	1	x	x	x	Composite
FS28	s	11/23/2021	1600	0.5	1	x	x	x	Composite

CS

Work Order Notes

Incident #: NAPP2126045826

API:30-015-34877

(Poker Lake Unit #261)

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

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		11.24.21 1043	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018 1

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1/20/2022 (Rev. 1)

Received by OCD: 6/27/2022 11:07:42 AM

Released to Imaging: 9/22/2022 12:11:24 PM

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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: 890-523 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 #: 890-1637-1
Address: 1211 W Florida Ave	Due Date Requested: 12/3/2021	Analysis Requested		Preservation Codes
City: Midland	TAT Requested (days):			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:
State Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: PLU 293 Flow Line	Project #: 89000004			
Site	SSOW#:			

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:										
FS08 (890-1637-1)	11/23/21	09 00 Mountain		Solid			X	X	X	X	X	1	
FS09 (890-1637-2)	11/23/21	09 05 Mountain		Solid			X	X	X	X	X	1	
FS10 (890-1637-3)	11/23/21	09 10 Mountain		Solid			X	X	X	X	X	1	
FS11 (890-1637-4)	11/23/21	09 15 Mountain		Solid			X	X	X	X	X	1	
FS12 (890-1637-5)	11/23/21	09 55 Mountain		Solid			X	X	X	X	X	1	
FS13 (890-1637-6)	11/23/21	15 43 Mountain		Solid			X	X	X	X	X	1	
FS18 (890-1637-7)	11/23/21	13:30 Mountain		Solid			X	X	X	X	X	1	
FS19 (890-1637-8)	11/23/21	13 35 Mountain		Solid			X	X	X	X	X	1	
FS20 (890-1637-9)	11/23/21	13 40 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	N. Gu	11/29/21		KRAMER	11.29.21	
2	Relinquished by	Date/Time	Company	Received by	Date/Time 730	Company
3	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks. 3.2/3.3

Ver: 06/08/2021

Received by OCD: 6/27/2022 11:07:42 AM

Released to Imaging: 9/22/2022 12:11:24 PM

1/20/2022 (Rev. 1)

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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: 890-523 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 #: 890-1637-1
Address: 1211 W Florida Ave	Due Date Requested: 12/3/2021			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: PLU 293 Flow Line	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)	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:										
FS21 (890-1637-10)	11/23/21	13 45 Mountain		Solid			X	X	X	X	X	1	
FS22 (890-1637-11)	11/23/21	14 15 Mountain		Solid			X	X	X	X	X	1	
FS23 (890-1637-12)	11/23/21	14 20 Mountain		Solid			X	X	X	X	X	1	
FS24 (890-1637-13)	11/23/21	14 25 Mountain		Solid			X	X	X	X	X	1	
FS25 (890-1637-14)	11/23/21	14 30 Mountain		Solid			X	X	X	X	X	1	
FS26 (890-1637-15)	11/23/21	15 50 Mountain		Solid			X	X	X	X	X	1	
FS27 (890-1637-16)	11/23/21	15 55 Mountain		Solid			X	X	X	X	X	1	
FS28 (890-1637-17)	11/23/21	16 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: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

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

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	N. Chen	11/24/21				
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

Ver: 06/08/2021

Received by OCD: 6/27/2022 11:07:42 AM

Released to Imaging: 9/22/2022 12:11:24 PM

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1637-1
SDG Number:

Login Number: 1637
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1637-1
SDG Number:

Login Number: 1637
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 11/29/21 02:35 PM

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

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-1805-1
Client Project/Site: plu 293 flow line
Revision: 1

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
1/20/2022 2:57:39 PM

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

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

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

Client: WSP USA Inc.
Project/Site: plu 293 flow line

Laboratory Job ID: 890-1805-1

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1805-1
Project/Site: plu 293 flow line

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
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: plu 293 flow line

Job ID: 890-1805-1

Job ID: 890-1805-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-1805-1

Comments
No additional comments.

Revision
The report being provided is a revision of the original report sent on 1/10/2022. The report (revision 1) is being revised due to: Per client email, corrected sample depth for FS14A to 1.

Receipt
The samples were received on 1/6/2022 1:42 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 was 3.8º C.

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

GC Semi VOA
Method 8015B NM: The CCV was biased slightly low for the gasoline hydrocarbon ranges however another acceptable CCV for this range was analyzed within the 12 hour window, therefore, the data was qualified and reported.

(CCV 880-16215/19)

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

General Chemistry
Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-16226 and analytical batch 880-16239 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.

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

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: plu 293 flow line

Job ID: 890-1805-1

Client Sample ID: SW06

Date Collected: 01/05/22 12:00
Date Received: 01/06/22 13:42
Sample Depth: 0 - 3

Lab Sample ID: 890-1805-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		01/07/22 08:00	01/07/22 13:21	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/07/22 08:00	01/07/22 13:21	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/07/22 08:00	01/07/22 13:21	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/07/22 08:00	01/07/22 13:21	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/07/22 08:00	01/07/22 13:21	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/07/22 08:00	01/07/22 13:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*01/07/22 08:00*	*01/07/22 13:21*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*01/07/22 08:00*	*01/07/22 13:21*	*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			01/07/22 14:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**91.2**		49.9		mg/Kg			01/10/22 12:40	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		01/07/22 08:53	01/07/22 13:44	1
Diesel Range Organics (Over C10-C28)	**91.2**		49.9		mg/Kg		01/07/22 08:53	01/07/22 13:44	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/07/22 08:53	01/07/22 13:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*01/07/22 08:53*	*01/07/22 13:44*	*1*
o-Terphenyl	*92*		*70 - 130*	*01/07/22 08:53*	*01/07/22 13:44*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1160**		5.05		mg/Kg			01/07/22 14:38	1

Client Sample ID: SW07

Date Collected: 01/05/22 12:05
Date Received: 01/06/22 13:42
Sample Depth: 0 - 3

Lab Sample ID: 890-1805-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		01/07/22 08:00	01/07/22 13:41	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/07/22 08:00	01/07/22 13:41	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/07/22 08:00	01/07/22 13:41	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/07/22 08:00	01/07/22 13:41	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/07/22 08:00	01/07/22 13:41	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/07/22 08:00	01/07/22 13:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*01/07/22 08:00*	*01/07/22 13:41*	*1*

Eurofins Carlsbad

Client Sample Results

Client: WSP USA Inc. Job ID: 890-1805-1
Project/Site: plu 293 flow line

Client Sample ID: SW07 — Lab Sample ID: 890-1805-2

Date Collected: 01/05/22 12:05 **Matrix: Solid**
Date Received: 01/06/22 13:42
Sample Depth: 0 - 3

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*01/07/22 08:00*	*01/07/22 13:41*	*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			01/07/22 14:59	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			01/10/22 12:40	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		01/07/22 08:53	01/07/22 14:24	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/07/22 08:53	01/07/22 14:24	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/07/22 08:53	01/07/22 14:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*01/07/22 08:53*	*01/07/22 14:24*	*1*
o-Terphenyl	*90*		*70 - 130*	*01/07/22 08:53*	*01/07/22 14:24*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**618**		4.98	mg/Kg			01/07/22 14:46	1

Client Sample ID: FS14A — Lab Sample ID: 890-1805-3

Date Collected: 01/05/22 12:10 **Matrix: Solid**
Date Received: 01/06/22 13:42
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		01/07/22 08:00	01/07/22 14:01	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/07/22 08:00	01/07/22 14:01	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/07/22 08:00	01/07/22 14:01	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		01/07/22 08:00	01/07/22 14:01	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/07/22 08:00	01/07/22 14:01	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/07/22 08:00	01/07/22 14:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*01/07/22 08:00*	*01/07/22 14:01*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*01/07/22 08:00*	*01/07/22 14:01*	*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			01/07/22 14:59	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			01/10/22 12:40	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: plu 293 flow line

Job ID: 890-1805-1

Client Sample ID: FS14A

Date Collected: 01/05/22 12:10
Date Received: 01/06/22 13:42
Sample Depth: 1

Lab Sample ID: 890-1805-3
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		01/07/22 08:53	01/07/22 14:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/07/22 08:53	01/07/22 14:49	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/07/22 08:53	01/07/22 14:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*01/07/22 08:53*	*01/07/22 14:49*	*1*
o-Terphenyl	*95*		*70 - 130*	*01/07/22 08:53*	*01/07/22 14:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**34.1**		4.95		mg/Kg			01/07/22 14:54	1

Client Sample ID: FS29

Date Collected: 01/05/22 12:20
Date Received: 01/06/22 13:42
Sample Depth: 0.5

Lab Sample ID: 890-1805-4
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		01/07/22 08:00	01/07/22 14:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/07/22 08:00	01/07/22 14:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/07/22 08:00	01/07/22 14:22	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		01/07/22 08:00	01/07/22 14:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/07/22 08:00	01/07/22 14:22	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		01/07/22 08:00	01/07/22 14:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*144*	*S1+*	*70 - 130*	*01/07/22 08:00*	*01/07/22 14:22*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*01/07/22 08:00*	*01/07/22 14:22*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/07/22 14:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**91.7**		50.0		mg/Kg			01/10/22 12:40	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		01/07/22 08:53	01/07/22 15:09	1
Diesel Range Organics (Over C10-C28)	**91.7**		50.0		mg/Kg		01/07/22 08:53	01/07/22 15:09	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/07/22 08:53	01/07/22 15:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*78*		*70 - 130*	*01/07/22 08:53*	*01/07/22 15:09*	*1*
o-Terphenyl	*87*		*70 - 130*	*01/07/22 08:53*	*01/07/22 15:09*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: plu 293 flow line

Job ID: 890-1805-1

Client Sample ID: FS29

Lab Sample ID: 890-1805-4
Matrix: Solid
Date Collected: 01/05/22 12:20
Date Received: 01/06/22 13:42
Sample Depth: 0.5

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2220**		24.8		mg/Kg			01/07/22 17:00	5

Client Sample ID: FS30

Lab Sample ID: 890-1805-5
Matrix: Solid
Date Collected: 01/05/22 12:30
Date Received: 01/06/22 13:42
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		01/07/22 08:00	01/07/22 14:42	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/07/22 08:00	01/07/22 14:42	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/07/22 08:00	01/07/22 14:42	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		01/07/22 08:00	01/07/22 14:42	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/07/22 08:00	01/07/22 14:42	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		01/07/22 08:00	01/07/22 14:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*01/07/22 08:00*	*01/07/22 14:42*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*01/07/22 08:00*	*01/07/22 14:42*	*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			01/07/22 14:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**99.9**		50.0		mg/Kg			01/10/22 12:40	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		01/07/22 08:53	01/07/22 15:29	1
Diesel Range Organics (Over C10-C28)	**99.9**		50.0		mg/Kg		01/07/22 08:53	01/07/22 15:29	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/07/22 08:53	01/07/22 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*01/07/22 08:53*	*01/07/22 15:29*	*1*
o-Terphenyl	*92*		*70 - 130*	*01/07/22 08:53*	*01/07/22 15:29*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1270**		5.00		mg/Kg			01/07/22 15:10	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: plu 293 flow line

Job ID: 890-1805-1

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)
890-1805-1	SW06	113	85
890-1805-1 MS	SW06	111	100
890-1805-1 MSD	SW06	104	95
890-1805-2	SW07	118	99
890-1805-3	FS14A	127	92
890-1805-4	FS29	144 S1+	97
890-1805-5	FS30	118	99
LCS 880-16163/1-A	Lab Control Sample	108	98
LCSD 880-16163/2-A	Lab Control Sample Dup	107	93
MB 880-16163/5-A	Method Blank	120	100

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-9941-A-61-E MS	Matrix Spike	76	80
880-9941-A-61-F MSD	Matrix Spike Duplicate	86	88
890-1805-1	SW06	85	92
890-1805-2	SW07	82	90
890-1805-3	FS14A	84	95
890-1805-4	FS29	78	87
890-1805-5	FS30	82	92
LCS 880-16210/2-A	Lab Control Sample	97	104
LCSD 880-16210/3-A	Lab Control Sample Dup	105	113
MB 880-16210/1-A	Method Blank	91	108

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: plu 293 flow line

Job ID: 890-1805-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-16163/5-A
Matrix: Solid
Analysis Batch: 16202

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 16163

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/07/22 08:00	01/07/22 11:30	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/07/22 08:00	01/07/22 11:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/07/22 08:00	01/07/22 11:30	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/07/22 08:00	01/07/22 11:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/07/22 08:00	01/07/22 11:30	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/07/22 08:00	01/07/22 11:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*01/07/22 08:00*	*01/07/22 11:30*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*01/07/22 08:00*	*01/07/22 11:30*	*1*

Lab Sample ID: LCS 880-16163/1-A
Matrix: Solid
Analysis Batch: 16202

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 16163

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09195		mg/Kg		92	70 - 130		
Toluene			0.100	0.09439		mg/Kg		94	70 - 130		
Ethylbenzene			0.100	0.1051		mg/Kg		105	70 - 130		
m-Xylene & p-Xylene			0.200	0.1991		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.09446		mg/Kg		94	70 - 130		

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

Lab Sample ID: LCSD 880-16163/2-A
Matrix: Solid
Analysis Batch: 16202

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 16163

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09529		mg/Kg		95	70 - 130	4	35
Toluene			0.100	0.1011		mg/Kg		101	70 - 130	7	35
Ethylbenzene			0.100	0.1017		mg/Kg		102	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1942		mg/Kg		97	70 - 130	2	35
o-Xylene			0.100	0.1003		mg/Kg		100	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: 890-1805-1 MSD
Matrix: Solid
Analysis Batch: 16202

Client Sample ID: SW06
Prep Type: Total/NA
Prep Batch: 16163

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.100	0.09925		mg/Kg					
Toluene	<0.00201	U	0.100	0.1053		mg/Kg					

QC Sample Results

Client: WSP USA Inc.
Project/Site: plu 293 flow line

Job ID: 890-1805-1

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

Lab Sample ID: 890-1805-1 MSD
Matrix: Solid
Analysis Batch: 16202

Client Sample ID: SW06
Prep Type: Total/NA
Prep Batch: 16163

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene	<0.00201	U	0.100	0.1019		mg/Kg					
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1981		mg/Kg					
o-Xylene	<0.00201	U	0.100	0.09328		mg/Kg					

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 890-1805-1 MS
Matrix: Solid
Analysis Batch: 16202

Client Sample ID: SW06
Prep Type: Total/NA

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

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

Lab Sample ID: MB 880-16210/1-A
Matrix: Solid
Analysis Batch: 16215

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 16210

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		01/07/22 08:53	01/07/22 11:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/07/22 08:53	01/07/22 11:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/07/22 08:53	01/07/22 11:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*01/07/22 08:53*	*01/07/22 11:13*	*1*
o-Terphenyl	*108*		*70 - 130*	*01/07/22 08:53*	*01/07/22 11:13*	*1*

Lab Sample ID: LCS 880-16210/2-A
Matrix: Solid
Analysis Batch: 16215

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 16210

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	752.8		mg/Kg		75	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	949.7		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*97*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: plu 293 flow line

Job ID: 890-1805-1

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

Lab Sample ID: LCSD 880-16210/3-A
Matrix: Solid
Analysis Batch: 16215

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 16210

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	858.9		mg/Kg		86	70 - 130	13	20
Diesel Range Organics (Over C10-C28)			1000	1156		mg/Kg		116	70 - 130	20	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*113*		*70 - 130*

Lab Sample ID: 880-9941-A-61-E MS
Matrix: Solid
Analysis Batch: 16215

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 16210

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	996	813.9		mg/Kg		80	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	996	995.7		mg/Kg		97	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*76*		*70 - 130*
o-Terphenyl	*80*		*70 - 130*

Lab Sample ID: 880-9941-A-61-F MSD
Matrix: Solid
Analysis Batch: 16215

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 16210

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	870.1		mg/Kg		86	70 - 130	7	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1112		mg/Kg		108	70 - 130	11	20

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-16226/1-A
Matrix: Solid
Analysis Batch: 16239

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			01/07/22 09:46	1

QC Sample Results

Client: WSP USA Inc.
Project/Site: plu 293 flow line

Job ID: 890-1805-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-16226/2-A
Matrix: Solid
Analysis Batch: 16239

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	233.7		mg/Kg		93	90 - 110		

Lab Sample ID: LCSD 880-16226/3-A
Matrix: Solid
Analysis Batch: 16239

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	235.0		mg/Kg		94	90 - 110	1	20

Lab Sample ID: 890-1805-5 MS
Matrix: Solid
Analysis Batch: 16239

Client Sample ID: FS30
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	1270		250	1467	4	mg/Kg		78	90 - 110		

Lab Sample ID: 890-1805-5 MSD
Matrix: Solid
Analysis Batch: 16239

Client Sample ID: FS30
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1270		250	1446	4	mg/Kg		70	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: plu 293 flow line

Job ID: 890-1805-1

GC VOA

Prep Batch: 16163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1805-1	SW06	Total/NA	Solid	5035	
890-1805-2	SW07	Total/NA	Solid	5035	
890-1805-3	FS14A	Total/NA	Solid	5035	
890-1805-4	FS29	Total/NA	Solid	5035	
890-1805-5	FS30	Total/NA	Solid	5035	
MB 880-16163/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-16163/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-16163/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1805-1 MSD	SW06	Total/NA	Solid	5035	

Analysis Batch: 16202

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1805-1	SW06	Total/NA	Solid	8021B	16163
890-1805-2	SW07	Total/NA	Solid	8021B	16163
890-1805-3	FS14A	Total/NA	Solid	8021B	16163
890-1805-4	FS29	Total/NA	Solid	8021B	16163
890-1805-5	FS30	Total/NA	Solid	8021B	16163
MB 880-16163/5-A	Method Blank	Total/NA	Solid	8021B	16163
LCS 880-16163/1-A	Lab Control Sample	Total/NA	Solid	8021B	16163
LCSD 880-16163/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	16163
890-1805-1 MS	SW06	Total/NA	Solid	8021B	
890-1805-1 MSD	SW06	Total/NA	Solid	8021B	16163

Analysis Batch: 16289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1805-1	SW06	Total/NA	Solid	Total BTEX	
890-1805-2	SW07	Total/NA	Solid	Total BTEX	
890-1805-3	FS14A	Total/NA	Solid	Total BTEX	
890-1805-4	FS29	Total/NA	Solid	Total BTEX	
890-1805-5	FS30	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 16210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1805-1	SW06	Total/NA	Solid	8015NM Prep	
890-1805-2	SW07	Total/NA	Solid	8015NM Prep	
890-1805-3	FS14A	Total/NA	Solid	8015NM Prep	
890-1805-4	FS29	Total/NA	Solid	8015NM Prep	
890-1805-5	FS30	Total/NA	Solid	8015NM Prep	
MB 880-16210/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-16210/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-16210/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-9941-A-61-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-9941-A-61-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 16215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1805-1	SW06	Total/NA	Solid	8015B NM	16210
890-1805-2	SW07	Total/NA	Solid	8015B NM	16210
890-1805-3	FS14A	Total/NA	Solid	8015B NM	16210

QC Association Summary

Client: WSP USA Inc.
Project/Site: plu 293 flow line

Job ID: 890-1805-1

GC Semi VOA (Continued)

Analysis Batch: 16215 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1805-4	FS29	Total/NA	Solid	8015B NM	16210
890-1805-5	FS30	Total/NA	Solid	8015B NM	16210
MB 880-16210/1-A	Method Blank	Total/NA	Solid	8015B NM	16210
LCS 880-16210/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	16210
LCSD 880-16210/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	16210
880-9941-A-61-E MS	Matrix Spike	Total/NA	Solid	8015B NM	16210
880-9941-A-61-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	16210

Analysis Batch: 16428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1805-1	SW06	Total/NA	Solid	8015 NM	
890-1805-2	SW07	Total/NA	Solid	8015 NM	
890-1805-3	FS14A	Total/NA	Solid	8015 NM	
890-1805-4	FS29	Total/NA	Solid	8015 NM	
890-1805-5	FS30	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 16226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1805-1	SW06	Soluble	Solid	DI Leach	
890-1805-2	SW07	Soluble	Solid	DI Leach	
890-1805-3	FS14A	Soluble	Solid	DI Leach	
890-1805-4	FS29	Soluble	Solid	DI Leach	
890-1805-5	FS30	Soluble	Solid	DI Leach	
MB 880-16226/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-16226/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-16226/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1805-5 MS	FS30	Soluble	Solid	DI Leach	
890-1805-5 MSD	FS30	Soluble	Solid	DI Leach	

Analysis Batch: 16239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1805-1	SW06	Soluble	Solid	300.0	16226
890-1805-2	SW07	Soluble	Solid	300.0	16226
890-1805-3	FS14A	Soluble	Solid	300.0	16226
890-1805-4	FS29	Soluble	Solid	300.0	16226
890-1805-5	FS30	Soluble	Solid	300.0	16226
MB 880-16226/1-A	Method Blank	Soluble	Solid	300.0	16226
LCS 880-16226/2-A	Lab Control Sample	Soluble	Solid	300.0	16226
LCSD 880-16226/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	16226
890-1805-5 MS	FS30	Soluble	Solid	300.0	16226
890-1805-5 MSD	FS30	Soluble	Solid	300.0	16226

Lab Chronicle

Client: WSP USA Inc.
Project/Site: plu 293 flow line

Job ID: 890-1805-1

Client Sample ID: SW06
Date Collected: 01/05/22 12:00
Date Received: 01/06/22 13:42

Lab Sample ID: 890-1805-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16163	01/07/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	16202	01/07/22 13:21	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	16289	01/07/22 14:59	KL	XEN MID
Total/NA	Analysis	8015 NM		1	16428	01/10/22 12:40	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16210	01/07/22 08:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16215	01/07/22 13:44	AJ	XEN MID
Soluble	Leach	DI Leach			16226	01/07/22 09:00	CH	XEN MID
Soluble	Analysis	300.0		1	16239	01/07/22 14:38	CH	XEN MID

Client Sample ID: SW07
Date Collected: 01/05/22 12:05
Date Received: 01/06/22 13:42

Lab Sample ID: 890-1805-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16163	01/07/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	16202	01/07/22 13:41	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	16289	01/07/22 14:59	KL	XEN MID
Total/NA	Analysis	8015 NM		1	16428	01/10/22 12:40	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16210	01/07/22 08:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16215	01/07/22 14:24	AJ	XEN MID
Soluble	Leach	DI Leach			16226	01/07/22 09:00	CH	XEN MID
Soluble	Analysis	300.0		1	16239	01/07/22 14:46	CH	XEN MID

Client Sample ID: FS14A
Date Collected: 01/05/22 12:10
Date Received: 01/06/22 13:42

Lab Sample ID: 890-1805-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16163	01/07/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	16202	01/07/22 14:01	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	16289	01/07/22 14:59	KL	XEN MID
Total/NA	Analysis	8015 NM		1	16428	01/10/22 12:40	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16210	01/07/22 08:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16215	01/07/22 14:49	AJ	XEN MID
Soluble	Leach	DI Leach			16226	01/07/22 09:00	CH	XEN MID
Soluble	Analysis	300.0		1	16239	01/07/22 14:54	CH	XEN MID

Client Sample ID: FS29
Date Collected: 01/05/22 12:20
Date Received: 01/06/22 13:42

Lab Sample ID: 890-1805-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16163	01/07/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	16202	01/07/22 14:22	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	16289	01/07/22 14:59	KL	XEN MID

Lab Chronicle

Client: WSP USA Inc.
Project/Site: plu 293 flow line

Job ID: 890-1805-1

Client Sample ID: FS29
Date Collected: 01/05/22 12:20
Date Received: 01/06/22 13:42

Lab Sample ID: 890-1805-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	16428	01/10/22 12:40	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16210	01/07/22 08:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16215	01/07/22 15:09	AJ	XEN MID
Soluble	Leach	DI Leach			16226	01/07/22 09:00	CH	XEN MID
Soluble	Analysis	300.0		5	16239	01/07/22 17:00	CH	XEN MID

Client Sample ID: FS30
Date Collected: 01/05/22 12:30
Date Received: 01/06/22 13:42

Lab Sample ID: 890-1805-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16163	01/07/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	16202	01/07/22 14:42	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	16289	01/07/22 14:59	KL	XEN MID
Total/NA	Analysis	8015 NM		1	16428	01/10/22 12:40	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16210	01/07/22 08:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16215	01/07/22 15:29	AJ	XEN MID
Soluble	Leach	DI Leach			16226	01/07/22 09:00	CH	XEN MID
Soluble	Analysis	300.0		1	16239	01/07/22 15:10	CH	XEN MID

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: plu 293 flow line

Job ID: 890-1805-1

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

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

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

Method Summary

Client: WSP USA Inc.
Project/Site: plu 293 flow line

Job ID: 890-1805-1

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: plu 293 flow line

Job ID: 890-1805-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1805-1	SW06	Solid	01/05/22 12:00	01/06/22 13:42	0 - 3
890-1805-2	SW07	Solid	01/05/22 12:05	01/06/22 13:42	0 - 3
890-1805-3	FS14A	Solid	01/05/22 12:10	01/06/22 13:42	1
890-1805-4	FS29	Solid	01/05/22 12:20	01/06/22 13:42	0.5
890-1805-5	FS30	Solid	01/05/22 12:30	01/06/22 13:42	0.5

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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)	Kyle Litrell
Company Name:	WSP USA Inc.	Company Name:	XTO Energy, Inc.
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79707	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849 Email:	Email:	Alexis.Castro@wsp.com, Tacoma.Morrissey@wsp.com

Work Order Comments

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

Project Name:	PLU 293 Flow Line	Turn Around	
Project Number:		Routine ☐	
P.O. Number:		Rush: 24hr	
Sampler's Name:	Alexis Castro	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	4.0/3.8	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 8021)	Chloride (EPA 300.0)	Sample Comments
SW06	S	01/05/2022	1200	0-3'	1	x	x	x	COMPOSITE
SW07	S	01/05/2022	1205	0-3'	1	x	x	x	COMPOSITE
FS14A	S	01/05/2022	1210	3'	1	x	x	x	COMPOSITE
FS29	S	01/05/2022	1220	0.5'	1	x	x	x	COMPOSITE
FS30	S	01/05/2022	1230	0.5'	1	x	x	x	COMPOSITE

890-1805 Chain of Custody

Work Order Notes

INC: NAPP2126045826

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

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

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

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		1.6.22 1:42	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

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1/20/2022 (Rev. 1)

Received by OCD: 6/27/2022 11:07:42 AM

Released to Imaging: 9/22/2022 12:11:24 PM

Login Sample Receipt Checklist

Client: WSP USA Inc. Job Number: 890-1805-1

Login Number: 1805 **List Source: Eurofins Carlsbad**
List Number: 1
Creator: Clifton, Cloe

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: 890-1805-1

Login Number: 1805
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/07/22 12:52 PM

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

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-1817-1
Laboratory SDG: 31403236.020.0129 task 08.02
Client Project/Site: PLU 293 Flow Line
Revision: 1

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
1/14/2022 10:40:18 AM

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

LINKS
Review your project results through TotalAccess
Have a Question? Ask The Expert
Visit us at: www.eurofinsus.com/Env

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 293 Flow Line

Laboratory Job ID: 890-1817-1
SDG: 31403236.020.0129 task 08.02

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1817-1
Project/Site: PLU 293 Flow Line SDG: 31403236.020.0129 task 08.02

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1817-1
SDG: 31403236.020.0129 task 08.02

Job ID: 890-1817-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-1817-1

REVISION

The report being provided is a revision of the original report sent on 1/13/2022. The report (revision 1) is being revised due to Per client email, corrected sample IDs.

Report revision history

Receipt
The samples were received on 1/11/2022 2:46 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-16598 and analytical batch 880-16579 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-1816-A-1-E) and (890-1816-A-1-F MS). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1817-1
SDG: 31403236.020.0129 task 08.02

Client Sample ID: SW09

Date Collected: 01/11/22 12:20
Date Received: 01/11/22 14:46
Sample Depth: 0 - 4

Lab Sample ID: 890-1817-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/12/22 09:21	01/13/22 03:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/12/22 09:21	01/13/22 03:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/12/22 09:21	01/13/22 03:58	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		01/12/22 09:21	01/13/22 03:58	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/12/22 09:21	01/13/22 03:58	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/12/22 09:21	01/13/22 03:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*01/12/22 09:21*	*01/13/22 03:58*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*01/12/22 09:21*	*01/13/22 03:58*	*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			01/12/22 13:10	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**61.9**		50.0		mg/Kg			01/11/22 14:19	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		01/12/22 14:31	01/13/22 02:56	1
Diesel Range Organics (Over C10-C28)	**61.9**		50.0		mg/Kg		01/12/22 14:31	01/13/22 02:56	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/13/22 02:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*76*		*70 - 130*	*01/12/22 14:31*	*01/13/22 02:56*	*1*
o-Terphenyl	*82*		*70 - 130*	*01/12/22 14:31*	*01/13/22 02:56*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**220**		5.00		mg/Kg			01/12/22 18:08	1

Client Sample ID: SW10

Date Collected: 01/11/22 09:35
Date Received: 01/11/22 14:46
Sample Depth: 0 - 4

Lab Sample ID: 890-1817-2

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		01/12/22 09:21	01/13/22 04:18	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/12/22 09:21	01/13/22 04:18	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/12/22 09:21	01/13/22 04:18	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/12/22 09:21	01/13/22 04:18	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/12/22 09:21	01/13/22 04:18	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/12/22 09:21	01/13/22 04:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*01/12/22 09:21*	*01/13/22 04:18*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1817-1
SDG: 31403236.020.0129 task 08.02

Client Sample ID: SW10

Date Collected: 01/11/22 09:35
Date Received: 01/11/22 14:46
Sample Depth: 0 - 4

Lab Sample ID: 890-1817-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*01/12/22 09:21*	*01/13/22 04:18*	*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			01/12/22 13:10	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			01/11/22 14:19	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		01/12/22 14:31	01/13/22 03:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/13/22 03:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/13/22 03:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*70*		*70 - 130*	*01/12/22 14:31*	*01/13/22 03:16*	*1*
o-Terphenyl	*76*		*70 - 130*	*01/12/22 14:31*	*01/13/22 03:16*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**375**		4.96		mg/Kg			01/12/22 18:18	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1817-1
SDG: 31403236.020.0129 task 08.02

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-9967-A-3-D MS	Matrix Spike	91	108
880-9967-A-3-E MSD	Matrix Spike Duplicate	89	104
890-1817-1	SW09	102	101
890-1817-2	SW10	99	75
LCS 880-16598/1-A	Lab Control Sample	88	105
LCSD 880-16598/2-A	Lab Control Sample Dup	94	112
MB 880-16533/5-A	Method Blank	118	96
MB 880-16598/5-A	Method Blank	96	78

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)
890-1816-A-1-F MS	Matrix Spike	65 S1-	65 S1-
890-1816-A-1-G MSD	Matrix Spike Duplicate	76	75
890-1817-1	SW09	76	82
890-1817-2	SW10	70	76
LCS 880-16679/2-A	Lab Control Sample	104	105
LCSD 880-16679/3-A	Lab Control Sample Dup	97	100
MB 880-16679/1-A	Method Blank	78	88

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1817-1
SDG: 31403236.020.0129 task 08.02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-16533/5-A
Matrix: Solid
Analysis Batch: 16579

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 16533

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/11/22 13:16	01/12/22 12:02	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/11/22 13:16	01/12/22 12:02	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/11/22 13:16	01/12/22 12:02	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/11/22 13:16	01/12/22 12:02	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/11/22 13:16	01/12/22 12:02	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/11/22 13:16	01/12/22 12:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*01/11/22 13:16*	*01/12/22 12:02*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*01/11/22 13:16*	*01/12/22 12:02*	*1*

Lab Sample ID: MB 880-16598/5-A
Matrix: Solid
Analysis Batch: 16579

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 16598

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/12/22 09:21	01/12/22 23:07	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/12/22 09:21	01/12/22 23:07	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/12/22 09:21	01/12/22 23:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/12/22 09:21	01/12/22 23:07	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/12/22 09:21	01/12/22 23:07	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/12/22 09:21	01/12/22 23:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*01/12/22 09:21*	*01/12/22 23:07*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*01/12/22 09:21*	*01/12/22 23:07*	*1*

Lab Sample ID: LCS 880-16598/1-A
Matrix: Solid
Analysis Batch: 16579

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 16598

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08139		mg/Kg		81	70 - 130		
Toluene			0.100	0.07125		mg/Kg		71	70 - 130		
Ethylbenzene			0.100	0.07268		mg/Kg		73	70 - 130		
m-Xylene & p-Xylene			0.200	0.1533		mg/Kg		77	70 - 130		
o-Xylene			0.100	0.07003		mg/Kg		70	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 880-16598/2-A
Matrix: Solid
Analysis Batch: 16579

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 16598

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08916		mg/Kg		89	70 - 130	9	35

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1817-1
SDG: 31403236.020.0129 task 08.02

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

Lab Sample ID: LCSD 880-16598/2-A
Matrix: Solid
Analysis Batch: 16579

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 16598

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.07555		mg/Kg		76	70 - 130	6	35
Ethylbenzene			0.100	0.07376		mg/Kg		74	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.1441		mg/Kg		72	70 - 130	6	35
o-Xylene			0.100	0.07508		mg/Kg		75	70 - 130	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 880-9967-A-3-D MS
Matrix: Solid
Analysis Batch: 16579

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 16598

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.0990	0.08530		mg/Kg		86	70 - 130
Toluene	<0.00200	U	0.0990	0.07409		mg/Kg		75	70 - 130
Ethylbenzene	<0.00200	U F1	0.0990	0.06941	F1	mg/Kg		69	70 - 130
m-Xylene & p-Xylene	<0.00399	U F1	0.198	0.1360	F1	mg/Kg		69	70 - 130
o-Xylene	<0.00200	U	0.0990	0.07162		mg/Kg		72	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 880-9967-A-3-E MSD
Matrix: Solid
Analysis Batch: 16579

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 16598

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0998	0.08199		mg/Kg		82	70 - 130	4	35
Toluene	<0.00200	U	0.0998	0.07214		mg/Kg		72	70 - 130	3	35
Ethylbenzene	<0.00200	U F1	0.0998	0.06941	F1	mg/Kg		69	70 - 130	0	35
m-Xylene & p-Xylene	<0.00399	U F1	0.200	0.1360	F1	mg/Kg		68	70 - 130	0	35
o-Xylene	<0.00200	U	0.0998	0.07103		mg/Kg		71	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

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

Lab Sample ID: MB 880-16679/1-A
Matrix: Solid
Analysis Batch: 16627

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 16679

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		01/12/22 14:31	01/12/22 20:35	1

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1817-1
Project/Site: PLU 293 Flow Line SDG: 31403236.020.0129 task 08.02

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

Lab Sample ID: MB 880-16679/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 16627 **Prep Batch: 16679**

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		01/12/22 14:31	01/12/22 20:35	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/12/22 14:31	01/12/22 20:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*78*		*70 - 130*	*01/12/22 14:31*	*01/12/22 20:35*	*1*
o-Terphenyl	*88*		*70 - 130*	*01/12/22 14:31*	*01/12/22 20:35*	*1*

Lab Sample ID: LCS 880-16679/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 16627 **Prep Batch: 16679**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	854.1		mg/Kg		85	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	996.3		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*105*		*70 - 130*

Lab Sample ID: LCSD 880-16679/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 16627 **Prep Batch: 16679**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	925.9		mg/Kg		93	70 - 130	8	20
Diesel Range Organics (Over C10-C28)			1000	1000		mg/Kg		100	70 - 130	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*97*		*70 - 130*
o-Terphenyl	*100*		*70 - 130*

Lab Sample ID: 890-1816-A-1-F MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 16627 **Prep Batch: 16679**

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	996	754.3		mg/Kg		76	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	996	840.3		mg/Kg		82	70 - 130		

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

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1817-1
SDG: 31403236.020.0129 task 08.02

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

Lab Sample ID: 890-1816-A-1-G MSD
Matrix: Solid
Analysis Batch: 16627

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 16679

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	852.4		mg/Kg		85	70 - 130	12	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1009		mg/Kg		99	70 - 130	18	20

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-16672/1-A
Matrix: Solid
Analysis Batch: 16673

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			01/12/22 16:27	1

Lab Sample ID: LCS 880-16672/2-A
Matrix: Solid
Analysis Batch: 16673

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	268.1		mg/Kg		107	90 - 110		

Lab Sample ID: LCSD 880-16672/3-A
Matrix: Solid
Analysis Batch: 16673

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	268.4		mg/Kg		107	90 - 110	0	20

Lab Sample ID: 890-1815-A-21-C MS
Matrix: Solid
Analysis Batch: 16673

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	7270		4990	12700		mg/Kg		109	90 - 110		

Lab Sample ID: 890-1815-A-21-D MSD
Matrix: Solid
Analysis Batch: 16673

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	7270		4990	12640		mg/Kg		108	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1817-1
SDG: 31403236.020.0129 task 08.02

GC VOA

Prep Batch: 16533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-16533/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 16579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1817-1	SW09	Total/NA	Solid	8021B	16598
890-1817-2	SW10	Total/NA	Solid	8021B	16598
MB 880-16533/5-A	Method Blank	Total/NA	Solid	8021B	16533
MB 880-16598/5-A	Method Blank	Total/NA	Solid	8021B	16598
LCS 880-16598/1-A	Lab Control Sample	Total/NA	Solid	8021B	16598
LCSD 880-16598/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	16598
880-9967-A-3-D MS	Matrix Spike	Total/NA	Solid	8021B	16598
880-9967-A-3-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	16598

Prep Batch: 16598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1817-1	SW09	Total/NA	Solid	5035	
890-1817-2	SW10	Total/NA	Solid	5035	
MB 880-16598/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-16598/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-16598/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-9967-A-3-D MS	Matrix Spike	Total/NA	Solid	5035	
880-9967-A-3-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 16668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1817-1	SW09	Total/NA	Solid	Total BTEX	
890-1817-2	SW10	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 16554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1817-1	SW09	Total/NA	Solid	8015 NM	
890-1817-2	SW10	Total/NA	Solid	8015 NM	

Analysis Batch: 16627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1817-1	SW09	Total/NA	Solid	8015B NM	16679
890-1817-2	SW10	Total/NA	Solid	8015B NM	16679
MB 880-16679/1-A	Method Blank	Total/NA	Solid	8015B NM	16679
LCS 880-16679/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	16679
LCSD 880-16679/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	16679
890-1816-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	16679
890-1816-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	16679

Prep Batch: 16679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1817-1	SW09	Total/NA	Solid	8015NM Prep	
890-1817-2	SW10	Total/NA	Solid	8015NM Prep	
MB 880-16679/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-16679/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1817-1
Project/Site: PLU 293 Flow Line SDG: 31403236.020.0129 task 08.02

GC Semi VOA (Continued)

Prep Batch: 16679 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-16679/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1816-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1816-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 16672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1817-1	SW09	Soluble	Solid	DI Leach	
890-1817-2	SW10	Soluble	Solid	DI Leach	
MB 880-16672/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-16672/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-16672/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1815-A-21-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1815-A-21-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 16673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1817-1	SW09	Soluble	Solid	300.0	16672
890-1817-2	SW10	Soluble	Solid	300.0	16672
MB 880-16672/1-A	Method Blank	Soluble	Solid	300.0	16672
LCS 880-16672/2-A	Lab Control Sample	Soluble	Solid	300.0	16672
LCSD 880-16672/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	16672
890-1815-A-21-C MS	Matrix Spike	Soluble	Solid	300.0	16672
890-1815-A-21-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	16672

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1817-1
SDG: 31403236.020.0129 task 08.02

Client Sample ID: SW09

Date Collected: 01/11/22 12:20
Date Received: 01/11/22 14:46

Lab Sample ID: 890-1817-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16598	01/12/22 09:21	KL	XEN MID
Total/NA	Analysis	8021B		1	16579	01/13/22 03:58	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	16668	01/12/22 13:10	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16679	01/12/22 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16627	01/13/22 02:56	AJ	XEN MID
Soluble	Leach	DI Leach			16672	01/12/22 08:00	CH	XEN MID
Soluble	Analysis	300.0		1	16673	01/12/22 18:08	CH	XEN MID

Client Sample ID: SW10

Date Collected: 01/11/22 09:35
Date Received: 01/11/22 14:46

Lab Sample ID: 890-1817-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16598	01/12/22 09:21	KL	XEN MID
Total/NA	Analysis	8021B		1	16579	01/13/22 04:18	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	16668	01/12/22 13:10	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16679	01/12/22 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16627	01/13/22 03:16	AJ	XEN MID
Soluble	Leach	DI Leach			16672	01/12/22 08:00	CH	XEN MID
Soluble	Analysis	300.0		1	16673	01/12/22 18:18	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-1817-1
Project/Site: PLU 293 Flow Line SDG: 31403236.020.0129 task 08.02

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

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

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

Method Summary

Client: WSP USA Inc. Job ID: 890-1817-1
Project/Site: PLU 293 Flow Line SDG: 31403236.020.0129 task 08.02

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: PLU 293 Flow Line

Job ID: 890-1817-1
SDG: 31403236.020.0129 task 08.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1817-1	SW09	Solid	01/11/22 12:20	01/11/22 14:46	0 - 4
890-1817-2	SW10	Solid	01/11/22 09:35	01/11/22 14:46	0 - 4

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Chain of Custody

Work Order No: _____

XENCO LABORATORIES

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

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Adrian Baker
Company Name:	WSP USA	Company Name:	XTO Energy, INC.
Address:	3300 North A Street Building 1, unit 222	Address:	3401 E Green St
City, State ZIP:	Midland, Texas 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	337-257-8307	Email:	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 293 Flow Line	Turn Around	
Project Number:	31403236.020.0129 Task 08.02	Routine ☐	
P.O. Number:		Rush: 24 hour	
Sampler's Name:	Payton Benner	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	1.4/1.2	Thermometer ID	TNM-007	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
SW06	S	01/11/22	12:20	0-4	1	X	X	X	Composite
SW07	S	01/11/22	9:35	0-4	1	X	X	X	Composite

890-1817 Chain of Custody

Work Order Notes

Cost Center: 1139243001
API 30-015-34877 (POKER LA

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

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		1-11-22 1446			
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Received by OCD: 6/27/2022 11:07:42 AM
Released to Imaging: 9/22/2022 12:11:24 PM
1/14/2022 (Rev. 1)
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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1817-1
SDG Number: 31403236.020.0129 task 08.02

Login Number: 1817
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1817-1
SDG Number: 31403236.020.0129 task 08.02

Login Number: 1817
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/12/22 12:07 PM

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

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

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

CONDITIONS

Action 120630

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 120630
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Delineation Work Plan Approved with Conditions. Any additional remedial activities required, if any, will be based on analytical laboratory data.	9/22/2022