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	NAPP2120846562
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 32.25337 Longitude -103.88211
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU Remuda Basin 4-24-30	Site Type Tank Battery
Date Release Discovered 07/15/2021	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
B	04	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)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 25.0	Volume Recovered (bbls) 25.0
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Corrosion caused a pinhole leak on the heater treater, releasing fluid into containment. All fluid was recovered. A 48-hour advance liner inspection notice was sent to NMOCD District 2. Liner was inspected and determined not to be operating as designed. A third-party contractor has been retained for remediation activities.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2120846562
District RP	
Facility ID	
Application ID	

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

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

Yes, by Adrian Baker to Bratcher, Mike, EMNRD; Venegas, Victoria, EMNRD; robert.Hamlet@state.nm.us; emily.hernandez@state.nm.us on Friday, July 16, 2021 9:07 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: 7/27/21

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

OCD Only

Received by: Ramona Marcus Date: 7/30/2021

Location:	PLU Remuda Basin 4-24-30 Battery	
Spill Date:	7/15/2021	
Area 1		
Approximate Area =	140.36	cu.ft.
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	25.00	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**25.00**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**25.00**	**bbls**

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2120846562
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2120846562
District RP	
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature: Adrian Baker Date: 10/13/2021

email: Adrian.Baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: Date:

Incident ID	NAPP2120846562
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature: Adrian Baker Date: 10/13/2021

email: Adrian.Baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: Date:

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

Closure Approved by: Jennifer Nobui Date: 03/09/2022

Printed Name: Jennifer Nobui Title: Environmental Specialist A

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

October 13, 2021

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

RE: Closure Request
PLU Remuda Basin 4-24-30 Tank Battery
Incident Number NAPP2120034052 & NAPP2120846562
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 and soil sampling activities at the Poker Lake Unit (PLU) Remuda Basin 4-24-30 Tank Battery (Site) in Unit B, Section 4, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following two releases of produced water at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this Closure Request and requesting no further action (NFA) for Incident Numbers NAPP2120034052 and NAPP2120846562.

RELEASE BACKGROUND

On July 7, 2021, corrosion on a heater treater water leg caused a pinhole leak and resulted in the release of 12.2 barrels (bbls) of produced water into the lined containment and onto the surface of the well pad. A vacuum truck was immediately dispatched to the Site to recover freestanding fluids; approximately 10 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form (Form C-141) on July 19, 2021. The release was assigned Incident Number NAPP2120034052.

On July 15, 2021, corrosion on a heater treater caused a pinhole leak and resulted in the release of approximately 25 bbls of produced water into the lined containment. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; all 25 bbls of produced water were recovered from within the lined containment. A 48-hour advance notice of liner inspection was provided via email to the NMOCD. A liner integrity inspection was conducted by XTO personnel following the fluid recovery and upon inspection, the liner was determined to be insufficient. XTO reported the release to the NMOCD via email on July 16, 2021 and submitted a Release Notification Form C-141 on July 27, 2021. The release was assigned Incident Number NAPP2120846562.

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 greater than 100 feet below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. The location of the borehole is approximately 0.6 miles southwest of the Site. Although this data point is greater than ½ mile from the Site, the presence of non-water bearing lithology observed in the borehole, the minimal difference of only 0.1 mile between the data point location and NMOCD's preferred radius, and depth to water information from other nearby wells is proposed to be sufficient for depth to water determination. During December 2020, WSP installed a soil boring (C-04497) utilizing a truck-mounted sonic drill rig. Soil boring C-04497 was drilled to a depth of 110 feet bgs. A WSP geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activities. The Well Record and Log is included in Attachment 1. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 110 feet. The borehole was properly abandoned with hydrated bentonite chips. The location of borehole C-04497 is provided on Figure 1. Water well data exists to the north and northeast of the Site and an additional eight data points indicate depth to water is greater than 400 feet bgs in the vicinity.

The closest continuously flowing water or significant watercourse to the Site is an intermittent riverine located approximately 7,339 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On August 24, 2021, WSP personnel visited the Site to evaluate the release extents based on information provided on the Form C-141s and visual observations. WSP personnel collected two preliminary assessment soil samples (SS01 and SS02) within the release extent associated with Incident Number NAPP2120034052 west of the containment, from a depth of approximately 0.5 feet bgs to assess the lateral extent of impacted soil. The release extended from the lined containment along the sloped berm to the edge of the pad. Preliminary soil samples SS01 and SS02 were collected from the sloped area of the pad. 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. While onsite, the location of the tear in the liner associated with Incident Number NAPP2120846562 was identified. The release extent, preliminary soil sample locations, and liner tear were mapped utilizing a handheld Global Positing System (GPS) and are presented on Figure 2.

On September 8, 2021, WSP personnel returned to the Site to advance one borehole (BH01) via hand auger near the location of the tear in the liner. Delineation soil samples were collected from borehole BH01 from depths of 0.5 feet and 1-foot bgs. Field screening results and observations for the borehole were logged on a lithologic/soil sampling log, which is included in Attachment 2.

The preliminary and delineation 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 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in preliminary soil samples SS01 and SS02 and borehole soil samples BH01 and BH01A. In order to confirm the absence of impacted soil, additional lateral and vertical delineation activities were warranted.

DELINEATION SOIL SAMPLING ACTIVITIES

Between September 17, 2021 and October 4, 2021, WSP personnel were at the Site to oversee delineation activities as indicated by visual observations, field screening activities, and laboratory analytical results for preliminary soil samples SS01 and SS02 and borehole soil samples BH01 and BH01A.

Potholes PH01 through PH03 were advanced to a depth of 4 feet bgs via backhoe to the north, east, and south of the lined containment to confirm the presence or absence of impacts to soil

outside of the containment. Boreholes BH02 and BH03 were advanced via hand auger to a depth of 4 feet bgs at the location of preliminary soil samples SS01 and SS02, to confirm the absence of impacted soil in the release area west of the containment. Delineation soil samples were collected from the potholes and boreholes at depths ranging from 1 foot to 4 feet bgs. Soil from the potholes and boreholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach© chloride QuanTab© test strips, respectively. Field screening results and observations were logged on lithologic/soil sampling logs, which are included in Attachment 2.

Two surface samples (SS03 and SS04) were collected in the pasture area west of the release extent to confirm the release did not impact soils off pad. The delineation and surface sample locations are presented on Figure 2. The 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.

SOIL ANALYTICAL RESULTS

Laboratory analytical results for preliminary soil samples SS01 and SS02 and the delineation samples from boreholes BH01 through BH03 and potholes PH01 through PH03 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria.

Laboratory analytical results for surface soil samples SS03 and SS04 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the strictest Table 1 Closure Criteria, confirming that the release did not reach off-pad soils. In addition, the terminal sample in potholes PH01 through PH03 and borehole BH03 provided vertical delineation to the strictest Table 1 Closure Criteria. The laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Attachment 4.

CLOSURE REQUEST

Site assessment and delineation activities were conducted at the Site to assess for the presence or absence of impacted soil resulting from the July 7, 2021 and July 15, 2021 releases of produced water. Laboratory analytical results for the preliminary and delineation soil samples, collected within and around the release extent, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the soil sample analytical results, no impacted soil was identified, and no further remediation was required. The tear in the liner was repaired. XTO respectfully requests NFA for Incident Numbers NAPP2120034052 & NAPP2120846562.

If you have any questions or comments, please do not hesitate to contact Ms. Ashley Ager at (970) 385-1096.

Sincerely,

WSP USA Inc.

Jeremy Hill
Environmental Scientist

Ashley L. Ager, P.G.
Managing Director, Geologist

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

Attachments:

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

FIGURES

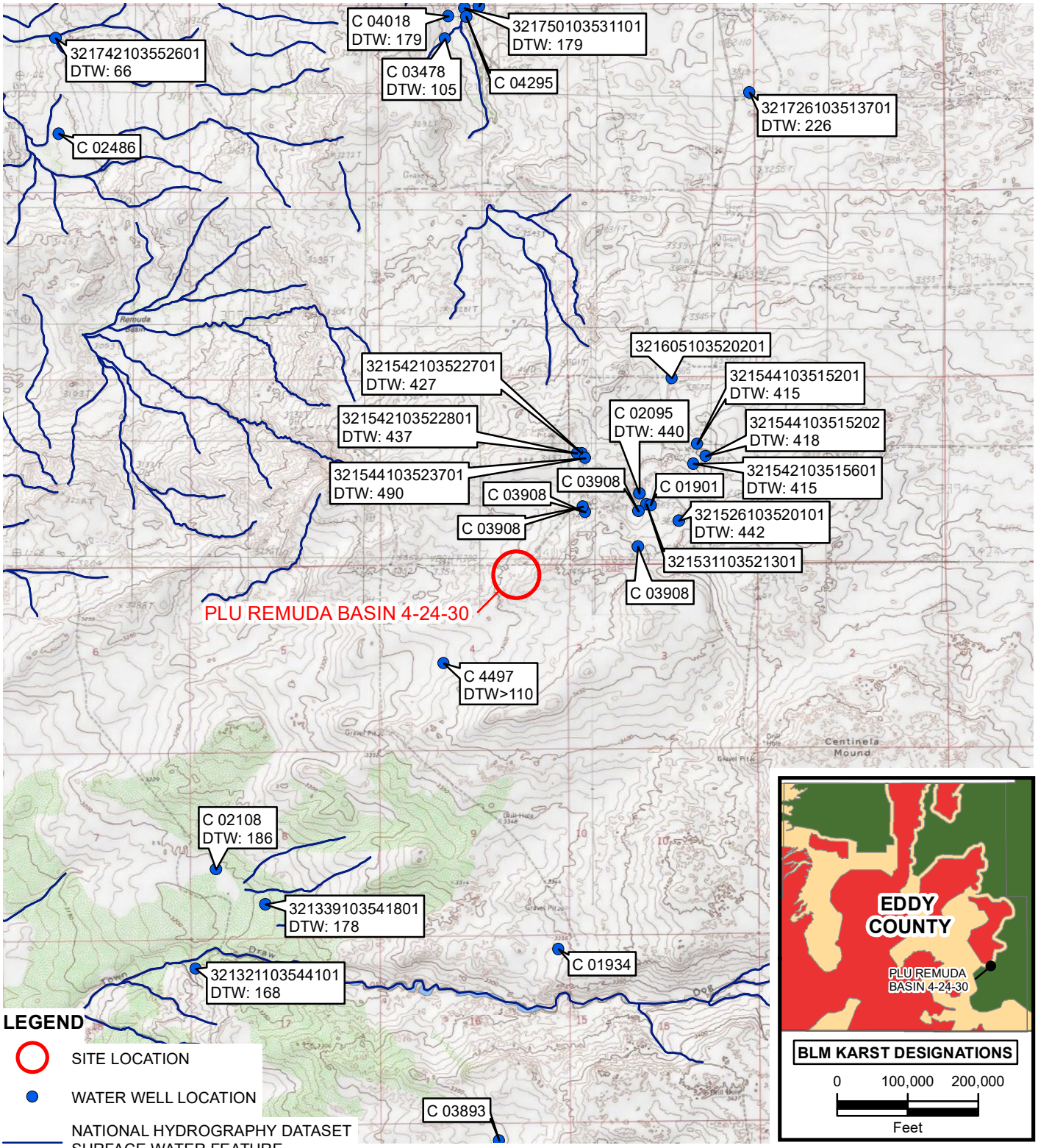
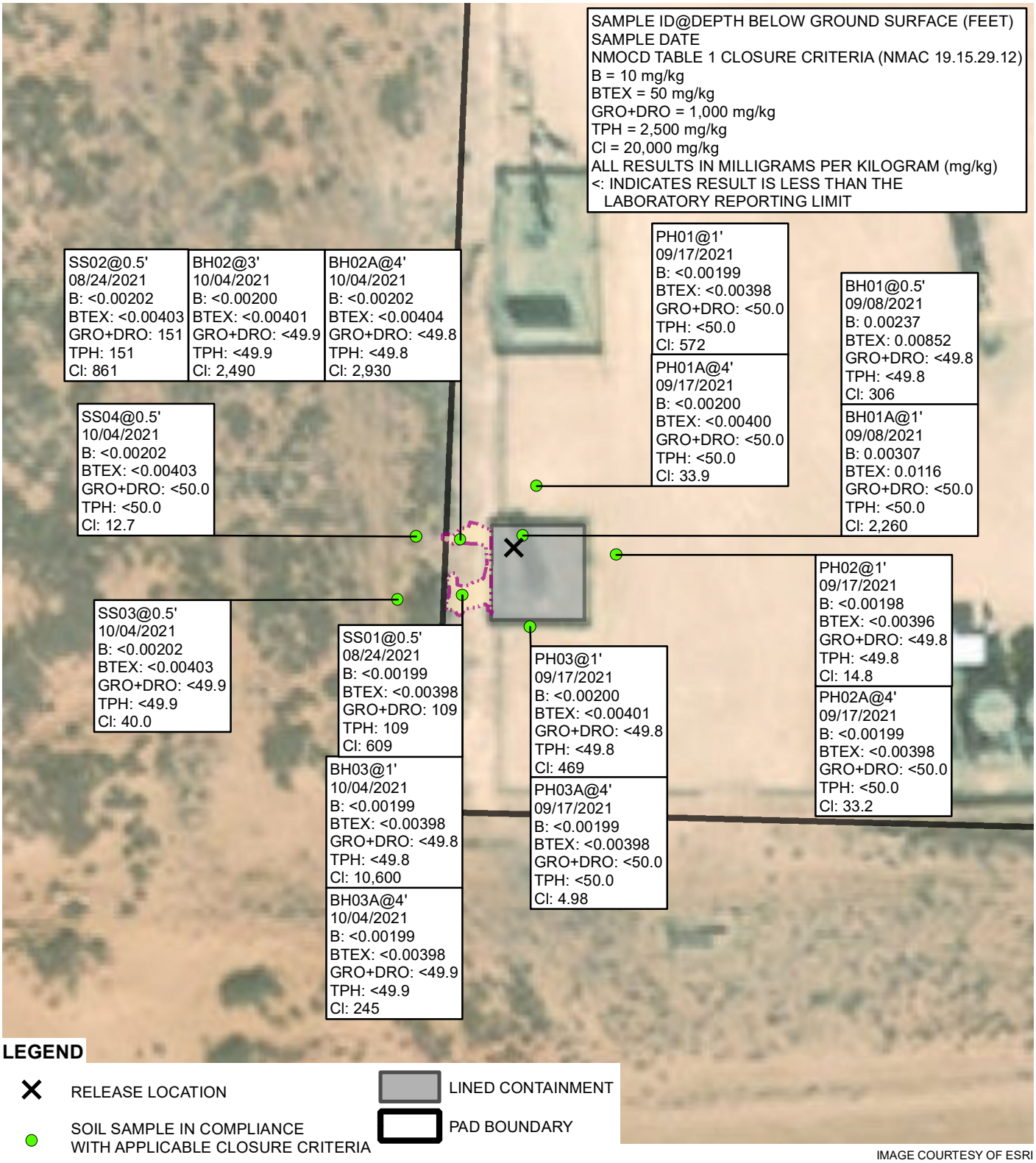


FIGURE 1
SITE LOCATION MAP
PLU REMUDA BASIN 4-24-30
UNIT B SEC 4 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC

P:\XTO Energy\GIS\31403236.020.0129.07_PLU REMUDA BASIN 4-24-30\MXD\31403236.020.0129.07.052_FIG01_SL_RECEPTOR_2021_1.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: INCIDENT NUMBERS NAPP2120034052 & NAPP2120846562

FIGURE 2
SOIL SAMPLE LOCATIONS
PLU REMUDA BASIN 4-24-30 TANK BATTERY
UNIT B SEC 4 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\31403236.020.0129.07_PLU REMUDA BASIN 4-24-30\MXD\31403236.020.0129.07_FIG02_SS_LOC_2021.mxd

TABLES

Released to Imaging: 3/9/2022 4:46:07 PM
Received by OCD: 10/13/2021 2:52:32 PM

Table 1

Soil Analytical Results
PLU Remuda Basin 4-24-30 Tank Battery
Tank Battery
Incident Numbers NAPP2120034052 & NAPP2120846562
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (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**
Preliminary Soil Samples										
SS01	08/24/2021	0.5	<0.00199	<0.00398	<49.9	109	<49.9	109	109	609
SS02	08/24/2021	0.5	<0.00202	<0.00403	<49.9	151	<49.9	151	151	861
SS03	10/04/2021	0.5	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	40.0
SS04	10/04/2021	0.5	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	12.7
Delineation Soil Samples										
BH01	09/08/2021	0.5	0.00237	0.00852	<49.8	<49.8	<49.8	<49.8	<49.8	306
BH01A	09/08/2021	1	0.00307	0.0116	<50.0	<50.0	<50.0	<50.0	<50.0	2,260
BH02	10/04/2021	3	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	2,490
BH02A	10/04/2021	4	<0.00202	<0.00404	<49.8	<49.8	<49.8	<49.8	<49.8	2,930
BH03	10/04/2021	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	10,600
BH03A	10/04/2021	4	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	245
PH01	09/17/2021	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	572
PH01A	09/17/2021	4	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	33.9
PH02	09/17/2021	1	<0.00198	<0.00396	<49.8	<49.8	<49.8	<49.8	<49.8	14.8
PH02A	09/17/2021	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	33.2
PH03	09/17/2021	1	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	469
PH03A	09/17/2021	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	4.98

ft - feet/foot

mg/kg - milligrams per kilograms

BTEX - benzene, toluene, ethylbenzene, and total xylenes

TPH - total petroleum hydrocarbons

DRO - diesel range organics

GRO - gasoline range organics

ORO - motor oil range organics

NMOCD - New Mexico Oil Conservation Division

NMAC - New Mexico Administrative Code

< - indicates result is less than the stated laboratory method practical quantitation limit

NE - Not Established

BOLD - indicates results exceed the higher of the background sample result or applicable regulatory standard

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

Released to Imaging: 3/9/2022 4:46:07 PM
Received by OCD: 10/13/2021 2:52:32 PM

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
NA	C 04497 POD1	1	2	3	04	24S	30E	604660	3568278

Driller License: 1249 **Driller Company:** ATKINS ENGINEERING ASSOC. INC.

Driller Name: JACKIE D ATKINS

Drill Start Date: 12/28/2020 **Drill Finish Date:** 12/28/2020 **Plug Date:**

Log File Date: 01/28/2021 **PCW Rcv Date:** **Source:**

Pump Type: **Pipe Discharge Size:** **Estimated Yield:** 0 GPM

Casing Size: **Depth Well:** 110 feet **Depth Water:**

he 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 im
ncerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

2021-1-15_C-4497_POD1_OSE_Well Record and Log_plu320-forsign

Final Audit Report 2021-01-15

Created:	2021-01-15
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAzOCc93aRyrJC5CsLdvdrv2ul-g9qO-bu

"2021-1-15_C-4497_POD1_OSE_Well Record and Log_plu320-forsign" History

Document created by Lucas Middleton (lucas@atkinseng.com)
2021-01-15 - 8:55:26 PM GMT- IP address: 69.21.248.123

Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2021-01-15 - 8:55:50 PM GMT

OSE OIL JAN 28 2021 AM11:35

Email viewed by Jack Atkins (jack@atkinseng.com)
2021-01-15 - 9:13:46 PM GMT- IP address: 74.50.153.115

Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2021-01-15 - 9:16:24 PM GMT - Time Source: server- IP address: 74.50.153.115

Agreement completed.
2021-01-15 - 9:16:24 PM GMT

Adobe Sign

PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: C-4497-POD1

Well owner: XTO ENERGY (Kyle Littrell) Phone No.: 432.682.8873

Mailing address: 6401 Holiday Hill Dr.

City: Midland State: Texas Zip code: 79707

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Jackie D. Atkins (Atkins Engineering Associates Inc.)

2) New Mexico Well Driller License No.: 1249 Expiration Date: 04/30/21

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Shane Eldridge

4) Date well plugging began: 1/19/2021 Date well plugging concluded: 1/19/2021

5) GPS Well Location: Latitude: 32 deg, 14 min, 46.69 sec
Longitude: -104 deg, 53 min, 20.46 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 110 ft below ground level (bgl), by the following manner: weighted tape

7) Static water level measured at initiation of plugging: n/a ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 12/1/2020

9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

OSE DII JAN 28 2021 AM11:35

Version: September 8, 2009
Page 1 of 2

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	0-10' Hydrated Bentonite	Approx. 26 gallons	26 gallons	Augers	
	10'-110' Drill Cuttings	Approx. 163 gallons	163 gallons	Boring	

OSE DII JAN 28 2021 AM11:35

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

III. SIGNATURE:

I, Jackie D. Atkins, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Jack Atkins — Signature of Well Driller

01/21/2021 — Date

Version: September 8, 2009
Page 2 of 2

2020-1-15_C-4497-POD1_Plugging Record-forsign

Final Audit Report 2021-01-20

Created:	2021-01-20
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAA2Rqn6oNtoM5ZDkZKWtVZGKdBw28cFN6O

"2020-1-15_C-4497-POD1_Plugging Record-forsign" History

Document created by Lucas Middleton (lucas@atkinseng.com)
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Email viewed by Jack Atkins (jack@atkinseng.com)
2021-01-20 - 4:27:42 PM GMT- IP address: 74.50.153.115

Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2021-01-20 - 4:29:06 PM GMT - Time Source: server- IP address: 74.50.153.115

Agreement completed.
2021-01-20 - 4:29:06 PM GMT

OSE DJT JAN 28 2021 AM11:35

Adobe Sign

Released to Imaging: 3/9/2022 4:46:07 PM
Received by OCD: 10/13/2021 2:52:32 PM

DESCRIPTION:

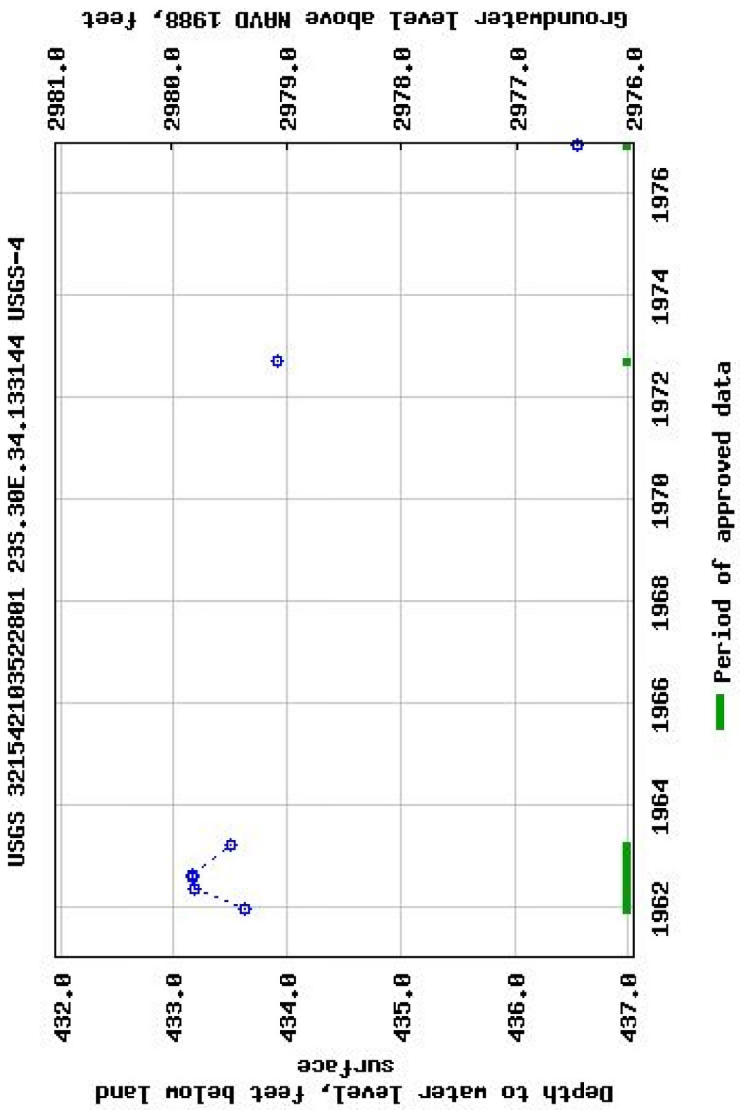
Latitude 32°15'45.42", Longitude 103°52'36.09" NAD83
Eddy County, New Mexico , Hydrologic Unit 13060011
Well depth: 518 feet
Land surface altitude: 3,413 feet above NAVD88.
Well completed in "Other aquifers" (N9999OTHER) national aquifer.
Well completed in "Rustler Formation" (312RSLR) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1961-12-12	1976-12-14	7
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 321542103522801 23S.30E.34.133144 USGS-4
Groundwater level above NAVD 1988, feet
2981.0
2980.0
2979.0
2978.0
2977.0
2976.0
Depth to water level, feet below land surface
432.0
433.0
434.0
435.0
436.0
437.0
1962
1964
1966
1968
1970
1972
1974
1976
Period of approved data

ATTACHMENT 2: LITHOLOGIC/SAMPLING LOGS

WSP USA

508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name:	Date:
BH01	9/8/2021
Site Name:	PLU Remuda Basin 4-24-30 TB
RP or Incident Number:	NAPP2120034052, NAPP2120846562
WSP Job Number:	31403236.020.0129

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: AC	Method: H. Auger
Lat/Long:	Field Screening: Hatch Chloride Strips, PID
Hole Diameter: 3"	Total Depth: 1'

Comments:
TD at 1 '

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D	370	0.8	N	BH01	0.5	0.5	GW	Well graded coarse gravel w/ Caliche. Brown/Light Brown. No odor. No Plasiticity
D	2,413	0.6	Y	BH01A	1	1	GW	Well graded coarse gravel w/ Caliche. Red/Brown. No odor. No Plasiticity
								Refusal @ 1 '

WSP USA

508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name:	Date:
BH02	10/4/2021
Site Name:	PLU Remuda Basin 4-24-30 TB
RP or Incident Number:	NAPP2120034052, NAPP2120846562
WSP Job Number:	31403236.020.0129

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: JH	Method: H. Auger
Lat/Long:	Field Screening: Hatch Chloride Strips, PID
Hole Diameter: 3"	Total Depth: 4'

Comments:
TD at 4 '

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
M	1,680	0.1	N			1	SP	Poorly graded, fine sand w/ caliche. Orange/Brown. No plasticity. No odor. Organics
M	2,128	0.0	N			2	SP	Poorly graded, fine sand w/ caliche. Orange/Brown. No plasticity. No odor. Organics
M	2,404	0.0	N	BH02	3	3	SPSM	Poorly graded fine sand w/ silt and caliche. Brown/Orange. No odor. No plasticity. Organics.
M	1,932	0.0	N	BH02A	4	4	SPSM	Poorly graded fine sand w/ silt and caliche. Brown. No odor. No plasticity. Organics.
								TD @ 4 feet

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: BH03	Date: 10/4/2021
Site Name:	PLU Remuda Basin 4-24-30 TB
RP or Incident Number:	NAPP2120034052, NAPP2120846562
WSP Job Number:	31403236.020.0129

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: JH	Method: H. Auger		
Lat/Long:	Field Screening: Hatch Chloride Strips, PID	Hole Diameter: 3"	Total Depth: 4'

Comments:
TD at 4 '

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
M	9,486	0.1	N	BH03	1	1	SW	Well graded, fine-medium sand w/ caliche. Orange. No plasticity. No odor. Organics
M	2,404	0.0	N			2	SPSM	Fine sand w/ silt and caliche gravel. Orange/Brown. No odor. No plasticity. Organics.
M	2,404	0.3	N			3	SPSM	Fine sand w/ silt and caliche gravel. Brown/Orange. No odor. No plasticity. Organics.
M	188	0.3	N	BH03A	4	4	SPSM	Fine sand w/ silt and caliche gravel. Brown/Orange. No odor. No plasticity. Organics.
								TD @ 4 feet

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: PH01	Date: 9/17/2021
Site Name:	PLU Remuda Basin 4-24-30 TB
RP or Incident Number:	NAPP2120034052, NAPP2120846562
WSP Job Number:	31403236.020.0129

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: LAD	Method: Back Hoe		
Lat/Long:	Field Screening: Hatch Chloride Strips, PID	Hole Diameter: 20"	Total Depth: 4'

Comments:
TD at 4 '

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D	2,157	3.5	N	PH01	1	1	CCHE	Caliche w/ some gravel. Some consolidation. Red/Brown. Odor. No plasticity.
M	<156	0.0	N			2	SM	Fine, silty sand with caliche gravel. Light Brown. No odor. No plasticity.
M	<156	0.9	N			3	SM	Fine, silty sand with caliche gravel. Brown. No odor. No plasticity.
M	<156	0.0	N	PH01A	4	4	SC	Poorly graded, clayey sand. Cohesive. Low Plasticity. Brown. No odor.
								TD @ 4 feet

WSP USA

508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name:	Date:
PH02	9/17/2021
Site Name:	PLU Remuda Basin 4-24-30 TB
RP or Incident Number:	NAPP2120034052, NAPP2120846562
WSP Job Number:	31403236.020.0129

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: LAD	Method: Back Hoe
Lat/Long:	Field Screening: Hatch Chloride Strips, PID
Hole Diameter: 20"	Total Depth: 4'

Comments:
TD at 4 '

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D	<156	0.0	N	PH02	1	1	CCHE	Caliche w/ some gravel. Some consolidation. Red/Brown. Odor. No plasticity.
M	<156	0.0	N			2	SM	Fine, silty sand with caliche gravel. Light Brown. No odor. No plasticity.
M	<156	0.0	N			3	SM	Fine, silty sand with caliche gravel. Brown. No odor. No plasticity.
M	<156	0.1	N	PH02A	4	4	SC	Poorly graded, clayey sand. Cohesive. Low Plasticity. Brown. No odor.
								TD @ 4 feet

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: PH03	Date: 9/17/2021
Site Name:	PLU Remuda Basin 4-24-30 TB
RP or Incident Number:	NAPP2120034052, NAPP2120846562
WSP Job Number:	31403236.020.0129

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: LAD	Method: Back Hoe		
Lat/Long:	Field Screening: Hatch Chloride Strips, PID	Hole Diameter: 20"	Total Depth: 4'

Comments:
TD at 4 '

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D	454	0.0	N	PH03	1	1	CCHE	Caliche w/ some gravel. Some consolidation. Red/Brown. Odor. No plasticity.
M	628	0.0	N			2	SM	Fine, silty sand with caliche gravel. Light Brown. No odor. No plasticity.
M	353	0.0	N			3	SM	Fine, silty sand with caliche gravel. Light Brown. No odor. No plasticity.
M	<156	0.3	N	PH03A	4	4	SC	Poorly graded, clayey sand. Cohesive. Low Plasticity. Brown. No odor.
								TD @ 4 feet

ATTACHMENT 3: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG		
XTO Energy, Inc.	PLU Remuda Basin 4-24-30 Tank Battery Eddy County, NM	NAPP2120034052 & NAPP2120846562

Photo No.	Date
1	August 24, 2021

View of liner tear to the west.

Photo No.	Date
2	August 24, 2021

View of west release extent to the north.

PHOTOGRAPHIC LOG		
XTO Energy, Inc.	PLU Remuda Basin 4-24-30 Tank Battery Eddy County, NM	NAPP2120034052 & NAPP2120846562

Photo No.	Date
3	September 17, 2021

View southeast of pothole for liner delineation to the north of containment.

Photo No.	Date
4	October 4, 2021

View south of BH02 and BH03 location.

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: 890-1153-1
Laboratory Sample Delivery Group: 31403236.020.0129
Client Project/Site: PLU Remuda Basin 4-24-30

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

Attn: Dan Moir

JKramer

Authorized for release by:
8/30/2021 8:47:58 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 Remuda Basin 4-24-30

Laboratory Job ID: 890-1153-1
SDG: 31403236.020.0129

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1153-1
Project/Site: PLU Remuda Basin 4-24-30 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: 890-1153-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

Job ID: 890-1153-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1153-1

Receipt
The samples were received on 8/25/2021 8:02 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: SS02 (890-1153-2). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-5425-A-1-A 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.

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 Remuda Basin 4-24-30

Job ID: 890-1153-1
SDG: 31403236.020.0129

Client Sample ID: SS01

Lab Sample ID: 890-1153-1
Matrix: Solid

Date Collected: 08/24/21 13:13
Date Received: 08/25/21 08:02
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		08/25/21 13:58	08/26/21 07:15	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/25/21 13:58	08/26/21 07:15	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/25/21 13:58	08/26/21 07:15	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/25/21 13:58	08/26/21 07:15	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/25/21 13:58	08/26/21 07:15	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/25/21 13:58	08/26/21 07:15	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		08/25/21 13:58	08/26/21 07:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*08/25/21 13:58*	*08/26/21 07:15*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*08/25/21 13:58*	*08/26/21 07:15*	*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		08/26/21 09:55	08/26/21 18:54	1
Diesel Range Organics (Over C10-C28)	**109**		49.9		mg/Kg		08/26/21 09:55	08/26/21 18:54	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/26/21 09:55	08/26/21 18:54	1
Total TPH	**109**		49.9		mg/Kg		08/26/21 09:55	08/26/21 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*08/26/21 09:55*	*08/26/21 18:54*	*1*
o-Terphenyl	*97*		*70 - 130*	*08/26/21 09:55*	*08/26/21 18:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**609**		4.95		mg/Kg			08/27/21 19:18	1

Client Sample ID: SS02

Lab Sample ID: 890-1153-2
Matrix: Solid

Date Collected: 08/24/21 13:47
Date Received: 08/25/21 08:02
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		08/25/21 13:58	08/26/21 07:36	1
Toluene	<0.00202	U	0.00202		mg/Kg		08/25/21 13:58	08/26/21 07:36	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		08/25/21 13:58	08/26/21 07:36	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		08/25/21 13:58	08/26/21 07:36	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		08/25/21 13:58	08/26/21 07:36	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		08/25/21 13:58	08/26/21 07:36	1
Total BTEX	<0.00403	U	0.00403		mg/Kg		08/25/21 13:58	08/26/21 07:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*138*	*S1+*	*70 - 130*	*08/25/21 13:58*	*08/26/21 07:36*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*08/25/21 13:58*	*08/26/21 07:36*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1153-1
SDG: 31403236.020.0129

Client Sample ID: SS02
Date Collected: 08/24/21 13:47
Date Received: 08/25/21 08:02
Sample Depth: 0.5

Lab Sample ID: 890-1153-2
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		08/26/21 09:55	08/26/21 19:15	1
Diesel Range Organics (Over C10-C28)	**151**		49.9		mg/Kg		08/26/21 09:55	08/26/21 19:15	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/26/21 09:55	08/26/21 19:15	1
Total TPH	**151**		49.9		mg/Kg		08/26/21 09:55	08/26/21 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*08/26/21 09:55*	*08/26/21 19:15*	*1*
o-Terphenyl	*97*		*70 - 130*	*08/26/21 09:55*	*08/26/21 19:15*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**861**		5.05		mg/Kg			08/27/21 19:23	1

Surrogate Summary

Client: WSP USA Inc. Job ID: 890-1153-1
Project/Site: PLU Remuda Basin 4-24-30 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)										
880-5425-A-1-A MS	Matrix Spike	134 S1+	93										
880-5425-A-1-B MSD	Matrix Spike Duplicate	116	104										
890-1153-1	SS01	126	99										
890-1153-2	SS02	138 S1+	96										
LCS 880-7057/1-A	Lab Control Sample	113	106										
LCSD 880-7057/2-A	Lab Control Sample Dup	109	93										
MB 880-7029/5-A	Method Blank	97	102										
MB 880-7057/5-A	Method Blank	109	97										

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)										
880-5425-A-1-F MS	Matrix Spike	82	87										
880-5425-A-1-G MSD	Matrix Spike Duplicate	82	87										
890-1153-1	SS01	85	97										
890-1153-2	SS02	85	97										
LCS 880-7115/2-A	Lab Control Sample	85	90										
LCSD 880-7115/3-A	Lab Control Sample Dup	87	93										
MB 880-7115/1-A	Method Blank	86	98										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1153-1
SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-7029/5-A
Matrix: Solid
Analysis Batch: 7042

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7029

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/24/21 16:46	08/25/21 12:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/24/21 16:46	08/25/21 12:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/24/21 16:46	08/25/21 12:54	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/24/21 16:46	08/25/21 12:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/24/21 16:46	08/25/21 12:54	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/24/21 16:46	08/25/21 12:54	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		08/24/21 16:46	08/25/21 12:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*08/24/21 16:46*	*08/25/21 12:54*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*08/24/21 16:46*	*08/25/21 12:54*	*1*

Lab Sample ID: MB 880-7057/5-A
Matrix: Solid
Analysis Batch: 7042

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7057

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/25/21 10:43	08/25/21 23:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/25/21 10:43	08/25/21 23:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/25/21 10:43	08/25/21 23:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/25/21 10:43	08/25/21 23:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/25/21 10:43	08/25/21 23:46	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/25/21 10:43	08/25/21 23:46	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		08/25/21 10:43	08/25/21 23:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*08/25/21 10:43*	*08/25/21 23:46*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*08/25/21 10:43*	*08/25/21 23:46*	*1*

Lab Sample ID: LCS 880-7057/1-A
Matrix: Solid
Analysis Batch: 7042

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7057

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08469		mg/Kg		85	70 - 130		
Toluene			0.100	0.08501		mg/Kg		85	70 - 130		
Ethylbenzene			0.100	0.08017		mg/Kg		80	70 - 130		
m-Xylene & p-Xylene			0.200	0.1686		mg/Kg		84	70 - 130		
o-Xylene			0.100	0.08535		mg/Kg		85	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1153-1
SDG: 31403236.020.0129

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

Lab Sample ID: LCSD 880-7057/2-A
Matrix: Solid
Analysis Batch: 7042

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7057

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07953		mg/Kg		80	70 - 130	6	35
Toluene			0.100	0.08027		mg/Kg		80	70 - 130	6	35
Ethylbenzene			0.100	0.07757		mg/Kg		78	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1629		mg/Kg		81	70 - 130	3	35
o-Xylene			0.100	0.08198		mg/Kg		82	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: 880-5425-A-1-A MS
Matrix: Solid
Analysis Batch: 7042

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 7057

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00198	U	0.0998	0.07239		mg/Kg		72	70 - 130
Toluene	<0.00198	U	0.0998	0.09185		mg/Kg		90	70 - 130
Ethylbenzene	<0.00198	U	0.0998	0.08219		mg/Kg		82	70 - 130
m-Xylene & p-Xylene	<0.00397	U	0.200	0.1685		mg/Kg		84	70 - 130
o-Xylene	<0.00198	U	0.0998	0.08876		mg/Kg		88	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*134*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: 880-5425-A-1-B MSD
Matrix: Solid
Analysis Batch: 7042

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 7057

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.0994	0.08393		mg/Kg		84	70 - 130	15	35
Toluene	<0.00198	U	0.0994	0.07659		mg/Kg		75	70 - 130	18	35
Ethylbenzene	<0.00198	U	0.0994	0.07062		mg/Kg		71	70 - 130	15	35
m-Xylene & p-Xylene	<0.00397	U	0.199	0.1472		mg/Kg		73	70 - 130	13	35
o-Xylene	<0.00198	U	0.0994	0.07509		mg/Kg		75	70 - 130	17	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1153-1
SDG: 31403236.020.0129

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

Lab Sample ID: MB 880-7115/1-A
Matrix: Solid
Analysis Batch: 7099

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7115

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/26/21 09:55	08/26/21 11:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/26/21 09:55	08/26/21 11:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/26/21 09:55	08/26/21 11:28	1
Total TPH	<50.0	U	50.0		mg/Kg		08/26/21 09:55	08/26/21 11:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*08/26/21 09:55*	*08/26/21 11:28*	*1*
o-Terphenyl	*98*		*70 - 130*	*08/26/21 09:55*	*08/26/21 11:28*	*1*

Lab Sample ID: LCS 880-7115/2-A
Matrix: Solid
Analysis Batch: 7099

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7115

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	894.7		mg/Kg		89	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	910.1		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*85*		*70 - 130*
o-Terphenyl	*90*		*70 - 130*

Lab Sample ID: LCSD 880-7115/3-A
Matrix: Solid
Analysis Batch: 7099

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7115

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	839.1		mg/Kg		84	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	923.4		mg/Kg		92	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

Lab Sample ID: 880-5425-A-1-F MS
Matrix: Solid
Analysis Batch: 7099

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 7115

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	995	879.7		mg/Kg		88	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	995	857.5		mg/Kg		84	70 - 130		

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1153-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

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

Lab Sample ID: 880-5425-A-1-F MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 7099 **Prep Batch: 7115**

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	82		70 - 130
o-Terphenyl	87		70 - 130

Lab Sample ID: 880-5425-A-1-G MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 7099 **Prep Batch: 7115**

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	838.7		mg/Kg		84	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	858.2		mg/Kg		83	70 - 130	0	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	82		70 - 130
o-Terphenyl	87		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-7089/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 7168

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			08/27/21 16:52	1

Lab Sample ID: LCS 880-7089/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 7168

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	272.5		mg/Kg		109	90 - 110		

Lab Sample ID: LCSD 880-7089/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 7168

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	272.5		mg/Kg		109	90 - 110	0	20

Lab Sample ID: 890-1150-A-16-D MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 7168

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	362		248	606.3		mg/Kg		98	90 - 110		

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1153-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-1150-A-16-E MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 7168

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	362		248	606.6		mg/Kg		99	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1153-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

GC VOA

Prep Batch: 7029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-7029/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 7042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1153-1	SS01	Total/NA	Solid	8021B	7057
890-1153-2	SS02	Total/NA	Solid	8021B	7057
MB 880-7029/5-A	Method Blank	Total/NA	Solid	8021B	7029
MB 880-7057/5-A	Method Blank	Total/NA	Solid	8021B	7057
LCS 880-7057/1-A	Lab Control Sample	Total/NA	Solid	8021B	7057
LCSD 880-7057/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	7057
880-5425-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	7057
880-5425-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	7057

Prep Batch: 7057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1153-1	SS01	Total/NA	Solid	5035	
890-1153-2	SS02	Total/NA	Solid	5035	
MB 880-7057/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-7057/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-7057/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-5425-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-5425-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 7099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1153-1	SS01	Total/NA	Solid	8015B NM	7115
890-1153-2	SS02	Total/NA	Solid	8015B NM	7115
MB 880-7115/1-A	Method Blank	Total/NA	Solid	8015B NM	7115
LCS 880-7115/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	7115
LCSD 880-7115/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	7115
880-5425-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	7115
880-5425-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	7115

Prep Batch: 7115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1153-1	SS01	Total/NA	Solid	8015NM Prep	
890-1153-2	SS02	Total/NA	Solid	8015NM Prep	
MB 880-7115/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-7115/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-7115/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-5425-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-5425-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 7089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1153-1	SS01	Soluble	Solid	DI Leach	
890-1153-2	SS02	Soluble	Solid	DI Leach	
MB 880-7089/1-A	Method Blank	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1153-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

HPLC/IC (Continued)

Leach Batch: 7089 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-7089/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-7089/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1150-A-16-D MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1150-A-16-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 7168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1153-1	SS01	Soluble	Solid	300.0	7089
890-1153-2	SS02	Soluble	Solid	300.0	7089
MB 880-7089/1-A	Method Blank	Soluble	Solid	300.0	7089
LCS 880-7089/2-A	Lab Control Sample	Soluble	Solid	300.0	7089
LCSD 880-7089/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	7089
890-1150-A-16-D MS	Matrix Spike	Soluble	Solid	300.0	7089
890-1150-A-16-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	7089

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1153-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

Client Sample ID: SS01 Lab Sample ID: 890-1153-1

Date Collected: 08/24/21 13:13 **Matrix: Solid**
Date Received: 08/25/21 08:02

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			7057	08/25/21 13:58	MR	XEN MID
Total/NA	Analysis	8021B		1	7042	08/26/21 07:15	KL	XEN MID
Total/NA	Prep	8015NM Prep			7115	08/26/21 09:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1	7099	08/26/21 18:54	AJ	XEN MID
Soluble	Leach	DI Leach			7089	08/25/21 18:14	SC	XEN MID
Soluble	Analysis	300.0		1	7168	08/27/21 19:18	SC	XEN MID

Client Sample ID: SS02 Lab Sample ID: 890-1153-2

Date Collected: 08/24/21 13:47 **Matrix: Solid**
Date Received: 08/25/21 08:02

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			7057	08/25/21 13:58	MR	XEN MID
Total/NA	Analysis	8021B		1	7042	08/26/21 07:36	KL	XEN MID
Total/NA	Prep	8015NM Prep			7115	08/26/21 09:55	DM	XEN MID
Total/NA	Analysis	8015B NM		1	7099	08/26/21 19:15	AJ	XEN MID
Soluble	Leach	DI Leach			7089	08/25/21 18:14	SC	XEN MID
Soluble	Analysis	300.0		1	7168	08/27/21 19:23	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: 890-1153-1
Project/Site: PLU Remuda Basin 4-24-30 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	T104704400-20-21	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
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

Method Summary

Client: WSP USA Inc. Job ID: 890-1153-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (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.

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 Remuda Basin 4-24-30

Job ID: 890-1153-1
SDG: 31403236.020.0129

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1153-1	SS01	Solid	08/24/21 13:13	08/25/21 08:02	0.5
890-1153-2	SS02	Solid	08/24/21 13:47	08/25/21 08:02	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

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
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:	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 Remuda Basin 4-24-30	Turn Around	
Project Number:	31403236.020.0129	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Elliot Lee	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	4.2 / 4.0	Thermometer ID		
Received Intact:	(Yes) No	T-NM-007		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Total Containers:	2	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS01	S	8/24/2021	13:13	0.5'	1	X	X	X
SS02	S	8/24/2021	13:47	0.5'	1	X	X	X

890-1153 Chain of Custody

Work Order Notes

Cost Center # 2124871001
Incident # NAPP2120034052

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

Sample Comments

SS01: DISCRETE
SS02: DISCRETE

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010:** 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471 : Hg**

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	N. Cato	8/25/21 8:02	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018 1

Received by OCD: 10/13/2021 2:52:32 PM
Released to Imaging: 3/9/2022 4:46:07 PM

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-367 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 #: 890-1153-1
Address: 1211 W Florida Ave,	Due Date Requested: 8/31/2021			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: PLU Remuda Basin 4-24-30	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 Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/6035FP_Calc BTEX	Total Number of containers	Special Instructions/Note.
			Preservation Code:								
SS01 (890-1153-1)	8/24/21	13 13 Mountain		Solid			X	X	X	1	
SS02 (890-1153-2)	8/24/21	13 47 Mountain		Solid			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	8.25.21			JKramer	8/25/21	
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
		2.3/2.8

Ver: 06/08/2021

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Received by OCD: 10/13/2021 2:52:32 PM
8/30/2021
Page 20 of 22
Released to Imaging: 3/9/2022 4:46:07 PM

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1153-1
SDG Number: 31403236.020.0129

Login Number: 1153
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: 890-1153-1
SDG Number: 31403236.020.0129

Login Number: 1153
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland
List Creation: 08/25/21 01:37 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	2.3/2.8
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: 890-1233-1
Laboratory Sample Delivery Group: 31403236.020.0129
Client Project/Site: PLU Remuda Basin 4-24-30

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

Attn: Dan Moir

JKramer

Authorized for release by:
9/16/2021 9:03:30 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 Remuda Basin 4-24-30

Laboratory Job ID: 890-1233-1
SDG: 31403236.020.0129

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1233-1
Project/Site: PLU Remuda Basin 4-24-30 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, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
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: 890-1233-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

Job ID: 890-1233-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1233-1

Receipt
The samples were received on 9/8/2021 3:31 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-7836 and analytical batch 880-7815 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: BH01A (890-1233-2) and (880-6047-A-1-B MSD). 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
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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

Client Sample Results

Client: WSP USA Inc. Job ID: 890-1233-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

Client Sample ID: BH01 — Lab Sample ID: 890-1233-1

Date Collected: 09/08/21 10:30 **Matrix: Solid**
Date Received: 09/08/21 15:31
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00237**		0.00201		mg/Kg		09/14/21 09:00	09/14/21 11:24	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/14/21 09:00	09/14/21 11:24	1
Ethylbenzene	**0.00615**		0.00201		mg/Kg		09/14/21 09:00	09/14/21 11:24	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/14/21 09:00	09/14/21 11:24	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/14/21 09:00	09/14/21 11:24	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/14/21 09:00	09/14/21 11:24	1
Total BTEX	**0.00852**		0.00402		mg/Kg		09/14/21 09:00	09/14/21 11:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*09/14/21 09:00*	*09/14/21 11:24*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*09/14/21 09:00*	*09/14/21 11:24*	*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		09/09/21 15:17	09/10/21 05:37	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/09/21 15:17	09/10/21 05:37	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/09/21 15:17	09/10/21 05:37	1
Total TPH	<49.8	U	49.8		mg/Kg		09/09/21 15:17	09/10/21 05:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*09/09/21 15:17*	*09/10/21 05:37*	*1*
o-Terphenyl	*93*		*70 - 130*	*09/09/21 15:17*	*09/10/21 05:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**306**		4.99		mg/Kg			09/15/21 18:41	1

Client Sample ID: BH01A — Lab Sample ID: 890-1233-2

Date Collected: 09/08/21 10:40 **Matrix: Solid**
Date Received: 09/08/21 15:31
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00307**		0.00200		mg/Kg		09/14/21 09:00	09/14/21 11:45	1
Toluene	**0.00569**		0.00200		mg/Kg		09/14/21 09:00	09/14/21 11:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/14/21 09:00	09/14/21 11:45	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/14/21 09:00	09/14/21 11:45	1
o-Xylene	**0.00280**		0.00200		mg/Kg		09/14/21 09:00	09/14/21 11:45	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/14/21 09:00	09/14/21 11:45	1
Total BTEX	**0.0116**		0.00399		mg/Kg		09/14/21 09:00	09/14/21 11:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*09/14/21 09:00*	*09/14/21 11:45*	*1*
1,4-Difluorobenzene (Surr)	*28*	*S1-*	*70 - 130*	*09/14/21 09:00*	*09/14/21 11:45*	*1*

Client Sample Results

Client: WSP USA Inc. Job ID: 890-1233-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

Client Sample ID: BH01A **Lab Sample ID: 890-1233-2**
Date Collected: 09/08/21 10:40 **Matrix: Solid**
Date Received: 09/08/21 15:31
Sample Depth: 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		09/09/21 15:17	09/10/21 05:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/09/21 15:17	09/10/21 05:58	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/09/21 15:17	09/10/21 05:58	1
Total TPH	<50.0	U	50.0		mg/Kg		09/09/21 15:17	09/10/21 05:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*09/09/21 15:17*	*09/10/21 05:58*	*1*
o-Terphenyl	*98*		*70 - 130*	*09/09/21 15:17*	*09/10/21 05:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2260**		25.0		mg/Kg			09/15/21 18:47	5

Surrogate Summary

Client: WSP USA Inc. Job ID: 890-1233-1
Project/Site: PLU Remuda Basin 4-24-30 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)
880-6047-A-1-A MS	Matrix Spike	119	89
880-6047-A-1-B MSD	Matrix Spike Duplicate	177 S1+	80
890-1233-1	BH01	97	109
890-1233-2	BH01A	104	28 S1-
LCS 880-7836/1-A	Lab Control Sample	122	84
LCSD 880-7836/2-A	Lab Control Sample Dup	113	90
MB 880-7801/5-A	Method Blank	126	98
MB 880-7836/5-A	Method Blank	125	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)
880-5918-A-1-H MS	Matrix Spike	87	86
880-5918-A-1-I MSD	Matrix Spike Duplicate	90	91
890-1233-1	BH01	87	93
890-1233-2	BH01A	86	98
LCS 880-7710/2-A	Lab Control Sample	91	91
LCSD 880-7710/3-A	Lab Control Sample Dup	94	100
MB 880-7710/1-A	Method Blank	84	93

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1233-1
SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-7801/5-A
Matrix: Solid
Analysis Batch: 7815

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7801

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/13/21 10:16	09/13/21 16:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/13/21 10:16	09/13/21 16:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/13/21 10:16	09/13/21 16:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/13/21 10:16	09/13/21 16:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/13/21 10:16	09/13/21 16:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/13/21 10:16	09/13/21 16:45	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		09/13/21 10:16	09/13/21 16:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*09/13/21 10:16*	*09/13/21 16:45*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*09/13/21 10:16*	*09/13/21 16:45*	*1*

Lab Sample ID: MB 880-7836/5-A
Matrix: Solid
Analysis Batch: 7815

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7836

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/13/21 16:00	09/14/21 03:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/13/21 16:00	09/14/21 03:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/13/21 16:00	09/14/21 03:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/13/21 16:00	09/14/21 03:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/13/21 16:00	09/14/21 03:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/13/21 16:00	09/14/21 03:41	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		09/13/21 16:00	09/14/21 03:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*09/13/21 16:00*	*09/14/21 03:41*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*09/13/21 16:00*	*09/14/21 03:41*	*1*

Lab Sample ID: LCS 880-7836/1-A
Matrix: Solid
Analysis Batch: 7815

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7836

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08762		mg/Kg		88	70 - 130		
Toluene			0.100	0.1026		mg/Kg		103	70 - 130		
Ethylbenzene			0.100	0.1087		mg/Kg		109	70 - 130		
m-Xylene & p-Xylene			0.200	0.1992		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.09707		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1233-1
SDG: 31403236.020.0129

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

Lab Sample ID: LCSD 880-7836/2-A
Matrix: Solid
Analysis Batch: 7815

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7836

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08024		mg/Kg		80	70 - 130	9	35
Toluene			0.100	0.09943		mg/Kg		99	70 - 130	3	35
Ethylbenzene			0.100	0.1019		mg/Kg		102	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1990		mg/Kg		100	70 - 130	0	35
o-Xylene			0.100	0.09178		mg/Kg		92	70 - 130	6	35

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

Lab Sample ID: 880-6047-A-1-A MS
Matrix: Solid
Analysis Batch: 7815

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 7836

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U F1	0.0990	0.02858	F1	mg/Kg		29	70 - 130
Toluene	<0.00200	U F2 F1	0.0990	0.04647	F1	mg/Kg		47	70 - 130
Ethylbenzene	<0.00200	U F2 F1	0.0990	0.04278	F1	mg/Kg		43	70 - 130
m-Xylene & p-Xylene	<0.00400	U F2 F1	0.198	0.08167	F1	mg/Kg		41	70 - 130
o-Xylene	<0.00200	U F2 F1	0.0990	0.04048	F1	mg/Kg		41	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: 880-6047-A-1-B MSD
Matrix: Solid
Analysis Batch: 7815

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 7836

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.0998	0.04031	F1	mg/Kg		40	70 - 130	34	35
Toluene	<0.00200	U F2 F1	0.0998	0.09007	F2	mg/Kg		90	70 - 130	64	35
Ethylbenzene	<0.00200	U F2 F1	0.0998	0.09953	F2	mg/Kg		100	70 - 130	80	35
m-Xylene & p-Xylene	<0.00400	U F2 F1	0.200	0.2007	F2	mg/Kg		101	70 - 130	84	35
o-Xylene	<0.00200	U F2 F1	0.0998	0.08753	F2	mg/Kg		88	70 - 130	74	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*177*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1233-1
SDG: 31403236.020.0129

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

Lab Sample ID: MB 880-7710/1-A
Matrix: Solid
Analysis Batch: 7687

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7710

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/09/21 15:17	09/09/21 21:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/09/21 15:17	09/09/21 21:14	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/09/21 15:17	09/09/21 21:14	1
Total TPH	<50.0	U	50.0		mg/Kg		09/09/21 15:17	09/09/21 21:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*09/09/21 15:17*	*09/09/21 21:14*	*1*
o-Terphenyl	*93*		*70 - 130*	*09/09/21 15:17*	*09/09/21 21:14*	*1*

Lab Sample ID: LCS 880-7710/2-A
Matrix: Solid
Analysis Batch: 7687

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7710

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	935.8		mg/Kg		94	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	870.6		mg/Kg		87	70 - 130		

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

Lab Sample ID: LCSD 880-7710/3-A
Matrix: Solid
Analysis Batch: 7687

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7710

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1024		mg/Kg		102	70 - 130	9	20
Diesel Range Organics (Over C10-C28)			1000	942.9		mg/Kg		94	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*94*		*70 - 130*
o-Terphenyl	*100*		*70 - 130*

Lab Sample ID: 880-5918-A-1-H MS
Matrix: Solid
Analysis Batch: 7687

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 7710

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	997	817.9		mg/Kg		82	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.8	U	997	759.6		mg/Kg		76	70 - 130		

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1233-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

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

Lab Sample ID: 880-5918-A-1-H MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 7687 **Prep Batch: 7710**

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	86		70 - 130

Lab Sample ID: 880-5918-A-1-I MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 7687 **Prep Batch: 7710**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	999	801.2		mg/Kg		80	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.8	U	999	797.1		mg/Kg		80	70 - 130	5	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	91		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-7740/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 7838

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/15/21 15:54	1

Lab Sample ID: LCS 880-7740/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 7838

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	250.4		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-7740/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 7838

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	250.8		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 880-5950-A-8-B MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 7838

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	1790		1240	3128		mg/Kg		108	90 - 110		

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1233-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-5950-A-8-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 7838

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1790		1240	3129		mg/Kg		108	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1233-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

GC VOA

Prep Batch: 7801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-7801/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 7815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1233-1	BH01	Total/NA	Solid	8021B	7836
890-1233-2	BH01A	Total/NA	Solid	8021B	7836
MB 880-7801/5-A	Method Blank	Total/NA	Solid	8021B	7801
MB 880-7836/5-A	Method Blank	Total/NA	Solid	8021B	7836
LCS 880-7836/1-A	Lab Control Sample	Total/NA	Solid	8021B	7836
LCSD 880-7836/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	7836
880-6047-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	7836
880-6047-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	7836

Prep Batch: 7836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1233-1	BH01	Total/NA	Solid	5035	
890-1233-2	BH01A	Total/NA	Solid	5035	
MB 880-7836/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-7836/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-7836/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-6047-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-6047-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 7687

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1233-1	BH01	Total/NA	Solid	8015B NM	7710
890-1233-2	BH01A	Total/NA	Solid	8015B NM	7710
MB 880-7710/1-A	Method Blank	Total/NA	Solid	8015B NM	7710
LCS 880-7710/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	7710
LCSD 880-7710/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	7710
880-5918-A-1-H MS	Matrix Spike	Total/NA	Solid	8015B NM	7710
880-5918-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	7710

Prep Batch: 7710

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1233-1	BH01	Total/NA	Solid	8015NM Prep	
890-1233-2	BH01A	Total/NA	Solid	8015NM Prep	
MB 880-7710/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-7710/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-7710/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-5918-A-1-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-5918-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 7740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1233-1	BH01	Soluble	Solid	DI Leach	
890-1233-2	BH01A	Soluble	Solid	DI Leach	
MB 880-7740/1-A	Method Blank	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1233-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

HPLC/IC (Continued)

Leach Batch: 7740 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-7740/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-7740/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-5950-A-8-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-5950-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 7838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1233-1	BH01	Soluble	Solid	300.0	7740
890-1233-2	BH01A	Soluble	Solid	300.0	7740
MB 880-7740/1-A	Method Blank	Soluble	Solid	300.0	7740
LCS 880-7740/2-A	Lab Control Sample	Soluble	Solid	300.0	7740
LCSD 880-7740/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	7740
880-5950-A-8-B MS	Matrix Spike	Soluble	Solid	300.0	7740
880-5950-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	7740

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1233-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

Client Sample ID: BH01 Lab Sample ID: 890-1233-1

Date Collected: 09/08/21 10:30 **Matrix: Solid**
Date Received: 09/08/21 15:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			7836	09/14/21 09:00	KL	XEN MID
Total/NA	Analysis	8021B		1	7815	09/14/21 11:24	KL	XEN MID
Total/NA	Prep	8015NM Prep			7710	09/09/21 15:17	DM	XEN MID
Total/NA	Analysis	8015B NM		1	7687	09/10/21 05:37	AJ	XEN MID
Soluble	Leach	DI Leach			7740	09/13/21 09:42	CH	XEN MID
Soluble	Analysis	300.0		1	7838	09/15/21 18:41	CH	XEN MID

Client Sample ID: BH01A Lab Sample ID: 890-1233-2

Date Collected: 09/08/21 10:40 **Matrix: Solid**
Date Received: 09/08/21 15:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			7836	09/14/21 09:00	KL	XEN MID
Total/NA	Analysis	8021B		1	7815	09/14/21 11:45	KL	XEN MID
Total/NA	Prep	8015NM Prep			7710	09/09/21 15:17	DM	XEN MID
Total/NA	Analysis	8015B NM		1	7687	09/10/21 05:58	AJ	XEN MID
Soluble	Leach	DI Leach			7740	09/13/21 09:42	CH	XEN MID
Soluble	Analysis	300.0		5	7838	09/15/21 18:47	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: 890-1233-1
Project/Site: PLU Remuda Basin 4-24-30 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
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

Method Summary

Client: WSP USA Inc. Job ID: 890-1233-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (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.

Laboratory References:

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

Sample Summary

Client: WSP USA Inc. Job ID: 890-1233-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1233-1	BH01	Solid	09/08/21 10:30	09/08/21 15:31	0.5
890-1233-2	BH01A	Solid	09/08/21 10:40	09/08/21 15:31	1

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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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9/16/2021

Project Manager:	Dan Moir	Bill to: (if different)	Adrian Baker
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	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 ☐ ST/UST ☐ RRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU Remuda Basin 4-24-30	Turn Around	
Project Number:	31403236.020.0129	Routine	✓
P.O. Number:	7/15/2021	Rush:	
Sampler's Name:	Alexis Castro	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	4.4/4.2	Thermometer ID	TM.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:	2

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
BH01	S	9/8/2021	1030	0.5	1	x	x	x	DISCRETE
BH01A	S	9/8/2021	1040	1	1	x	x	x	DISCRETE

890-1233 Chain of Custody

Work Order Notes

CC:2124871001
INC:NAPP2120846562

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			4.8.21 1528	2		
3				4		
5				6		

Revised Date 051418 Rev 2018.1

Received by OCD: 10/13/2021 2:52:32 PM

Released to Imaging: 3/9/2022 4:46:07 PM

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-400 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 #: 890-1233-1
Address: 1211 W Florida Ave	Due Date Requested: 9/14/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: PLU Remuda Basin 4-24-30	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 Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note
			Preservation Code:								
BH01 (890-1233-1)	9/8/21	10 30 Mountain		Solid			X	X	X	1	
BH01A (890-1233-2)	9/8/21	10 40 Mountain		Solid			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: Cue Corp 9.8.21	Date/Time	Company	Received by:	Date/Time: 9-9-21 11:30 am	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 2.1 / 2.0

Ver 06/08/2021

Received by OCD: 10/13/2021 2:52:32 PM
Released to Imaging: 3/9/2022 4:46:07 PM
9/16/2021

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1233-1
SDG Number: 31403236.020.0129

Login Number: 1233
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: 890-1233-1
SDG Number: 31403236.020.0129

Login Number: 1233
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Xenco, Midland
List Creation: 09/09/21 11:31 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.1 / 2.6
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: 890-1285-1
Laboratory SDG: 31403236.020.0129 Task 07.02
Client Project/Site: PLU Remuda Basin 4-24-30

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
9/28/2021 8:48:31 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 Remuda Basin 4-24-30

Laboratory Job ID: 890-1285-1
SDG: 31403236.020.0129 Task 07.02

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1285-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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: 890-1285-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

Job ID: 890-1285-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1285-1

Receipt
The samples were received on 9/20/2021 12:49 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 3.0°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-8263 and analytical batch 880-8262 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH03A (890-1285-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-8251 and analytical batch 880-8299 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
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-8255 and analytical batch 880-8391 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: WSP USA Inc. Job ID: 890-1285-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

Client Sample ID: PH03
Lab Sample ID: 890-1285-1
Date Collected: 09/17/21 14:44
Matrix: Solid
Date Received: 09/20/21 12:49
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		09/22/21 09:52	09/24/21 07:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/22/21 09:52	09/24/21 07:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/22/21 09:52	09/24/21 07:06	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/22/21 09:52	09/24/21 07:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/22/21 09:52	09/24/21 07:06	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/22/21 09:52	09/24/21 07:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*09/22/21 09:52*	*09/24/21 07:06*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*09/22/21 09:52*	*09/24/21 07:06*	*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		09/21/21 14:36	09/21/21 21:21	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/21/21 14:36	09/21/21 21:21	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/21/21 14:36	09/21/21 21:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*09/21/21 14:36*	*09/21/21 21:21*	*1*
o-Terphenyl	*122*		*70 - 130*	*09/21/21 14:36*	*09/21/21 21:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**469**		4.99		mg/Kg			09/25/21 20:46	1

Client Sample ID: PH03A
Lab Sample ID: 890-1285-2
Date Collected: 09/17/21 14:59
Matrix: Solid
Date Received: 09/20/21 12:49
Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U F2 F1	0.00199		mg/Kg		09/22/21 13:16	09/24/21 03:45	1
Toluene	<0.00199	U F2 F1	0.00199		mg/Kg		09/22/21 13:16	09/24/21 03:45	1
Ethylbenzene	<0.00199	U F1	0.00199		mg/Kg		09/22/21 13:16	09/24/21 03:45	1
m-Xylene & p-Xylene	<0.00398	U F2 F1	0.00398		mg/Kg		09/22/21 13:16	09/24/21 03:45	1
o-Xylene	<0.00199	U F1	0.00199		mg/Kg		09/22/21 13:16	09/24/21 03:45	1
Xylenes, Total	<0.00398	U F2 F1	0.00398		mg/Kg		09/22/21 13:16	09/24/21 03:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*09/22/21 13:16*	*09/24/21 03:45*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*09/22/21 13:16*	*09/24/21 03:45*	*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		09/21/21 14:36	09/21/21 22:22	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/21/21 14:36	09/21/21 22:22	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1285-1
SDG: 31403236.020.0129 Task 07.02

Client Sample ID: PH03A
Date Collected: 09/17/21 14:59
Date Received: 09/20/21 12:49
Sample Depth: 4

Lab Sample ID: 890-1285-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/21/21 14:36	09/21/21 22:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*09/21/21 14:36*	*09/21/21 22:22*	*1*
o-Terphenyl	*101*		*70 - 130*	*09/21/21 14:36*	*09/21/21 22:22*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4.98**		4.95		mg/Kg			09/25/21 20:53	1

Surrogate Summary

Client: WSP USA Inc. Job ID: 890-1285-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-6278-A-71-D MS	Matrix Spike	0 S1-	0 S1-
880-6278-A-71-E MSD	Matrix Spike Duplicate	0 S1-	0 S1-
890-1285-1	PH03	99	87
890-1285-2	PH03A	131 S1+	75
890-1285-2 MS	PH03A	123	64 S1-
890-1285-2 MSD	PH03A	123	81
890-1289-A-1-F MSD	Matrix Spike Duplicate	130	80
LCS 880-8243/1-A	Lab Control Sample	125	76
LCS 880-8251/1-A	Lab Control Sample	101	88
LCS 880-8263/1-A	Lab Control Sample	128	71
LCSD 880-8243/2-A	Lab Control Sample Dup	123	100
LCSD 880-8251/2-A	Lab Control Sample Dup	104	86
LCSD 880-8263/2-A	Lab Control Sample Dup	129	79
MB 880-8209/5-A	Method Blank	109	79
MB 880-8243/5-A	Method Blank	108	71
MB 880-8251/5-A	Method Blank	122	102
MB 880-8263/5-A	Method Blank	101	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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1285-1	PH03	107	122
890-1285-1 MS	PH03	100	100
890-1285-1 MSD	PH03	90	89
890-1285-2	PH03A	92	101
LCS 880-8211/2-A	Lab Control Sample	104	103
LCSD 880-8211/3-A	Lab Control Sample Dup	106	109
MB 880-8211/1-A	Method Blank	96	114

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1285-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-8209/5-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8262 **Prep Batch: 8209**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/22/21 09:00	09/23/21 16:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/22/21 09:00	09/23/21 16:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/22/21 09:00	09/23/21 16:32	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/22/21 09:00	09/23/21 16:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/22/21 09:00	09/23/21 16:32	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/22/21 09:00	09/23/21 16:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*09/22/21 09:00*	*09/23/21 16:32*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*09/22/21 09:00*	*09/23/21 16:32*	*1*

Lab Sample ID: MB 880-8243/5-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8299 **Prep Batch: 8243**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/22/21 08:59	09/23/21 12:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/22/21 08:59	09/23/21 12:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/22/21 08:59	09/23/21 12:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/22/21 08:59	09/23/21 12:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/22/21 08:59	09/23/21 12:09	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/22/21 08:59	09/23/21 12:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*09/22/21 08:59*	*09/23/21 12:09*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*09/22/21 08:59*	*09/23/21 12:09*	*1*

Lab Sample ID: LCS 880-8243/1-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8299 **Prep Batch: 8243**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08174		mg/Kg		82	70 - 130		
Toluene			0.100	0.1089		mg/Kg		109	70 - 130		
Ethylbenzene			0.100	0.1095		mg/Kg		110	70 - 130		
m-Xylene & p-Xylene			0.200	0.2051		mg/Kg		103	70 - 130		
o-Xylene			0.100	0.09630		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*

Lab Sample ID: LCSD 880-8243/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8299 **Prep Batch: 8243**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07326		mg/Kg		73	70 - 130	11	35

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1285-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

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

Lab Sample ID: LCSD 880-8243/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8299 **Prep Batch: 8243**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.1012		mg/Kg		101	70 - 130	7	35
Ethylbenzene			0.100	0.1052		mg/Kg		105	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1915		mg/Kg		96	70 - 130	7	35
o-Xylene			0.100	0.09459		mg/Kg		95	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-1289-A-1-F MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8299 **Prep Batch: 8243**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.101	0.03211	F1	mg/Kg		32	70 - 130	15	35
Toluene	<0.00200	U F1	0.101	0.04330	F1	mg/Kg		43	70 - 130	17	35
Ethylbenzene	<0.00200	U F1	0.101	0.04349	F1	mg/Kg		43	70 - 130	19	35
m-Xylene & p-Xylene	<0.00400	U F1 F2	0.201	0.04392	F1 F2	mg/Kg		22	70 - 130	36	35
o-Xylene	<0.00200	U F1	0.101	0.04119	F1	mg/Kg		41	70 - 130	13	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*

Lab Sample ID: MB 880-8251/5-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8299 **Prep Batch: 8251**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/22/21 09:52	09/23/21 23:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/22/21 09:52	09/23/21 23:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/22/21 09:52	09/23/21 23:10	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/22/21 09:52	09/23/21 23:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/22/21 09:52	09/23/21 23:10	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/22/21 09:52	09/23/21 23:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*09/22/21 09:52*	*09/23/21 23:10*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*09/22/21 09:52*	*09/23/21 23:10*	*1*

Lab Sample ID: LCS 880-8251/1-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8299 **Prep Batch: 8251**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene			0.100	0.07269		mg/Kg		73	70 - 130
Toluene			0.100	0.09456		mg/Kg		95	70 - 130
Ethylbenzene			0.100	0.09602		mg/Kg		96	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1285-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

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

Lab Sample ID: LCS 880-8251/1-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8299 **Prep Batch: 8251**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
m-Xylene & p-Xylene			0.200	0.1732		mg/Kg		87	70 - 130		
o-Xylene			0.100	0.08407		mg/Kg		84	70 - 130		

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

Lab Sample ID: LCSD 880-8251/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8299 **Prep Batch: 8251**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07313		mg/Kg		73	70 - 130	1	35
Toluene			0.100	0.09644		mg/Kg		96	70 - 130	2	35
Ethylbenzene			0.100	0.09878		mg/Kg		99	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1767		mg/Kg		88	70 - 130	2	35
o-Xylene			0.100	0.08640		mg/Kg		86	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*

Lab Sample ID: 880-6278-A-71-D MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8299 **Prep Batch: 8251**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U F1	0.100	<0.00201	U F1	mg/Kg		0	70 - 130		
Toluene	<0.00200	U F1	0.100	<0.00201	U F1	mg/Kg		0	70 - 130		
Ethylbenzene	<0.00200	U F1	0.100	<0.00201	U F1	mg/Kg		0	70 - 130		
m-Xylene & p-Xylene	<0.00400	U F1	0.201	<0.00402	U F1	mg/Kg		0	70 - 130		
o-Xylene	<0.00200	U F1	0.100	<0.00201	U F1	mg/Kg		0	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*0*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*0*	*S1-*	*70 - 130*

Lab Sample ID: 880-6278-A-71-E MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8299 **Prep Batch: 8251**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.101	NR	F1	ug/L		0	70 - 130	NC	35
Toluene	<0.00200	U F1	0.101	<0.00202	U F1	mg/Kg		0	70 - 130	NC	35
Ethylbenzene	<0.00200	U F1	0.101	<0.00202	U F1	mg/Kg		0	70 - 130	NC	35
m-Xylene & p-Xylene	<0.00400	U F1	0.202	<0.00403	U F1	mg/Kg		0	70 - 130	NC	35
o-Xylene	<0.00200	U F1	0.101	<0.00202	U F1	mg/Kg		0	70 - 130	NC	35

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1285-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

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

Lab Sample ID: 880-6278-A-71-E MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8299 **Prep Batch: 8251**

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	0	S1-	70 - 130
1,4-Difluorobenzene (Surr)	0	S1-	70 - 130

Lab Sample ID: MB 880-8263/5-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8262 **Prep Batch: 8263**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/22/21 13:16	09/24/21 03:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/22/21 13:16	09/24/21 03:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/22/21 13:16	09/24/21 03:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/22/21 13:16	09/24/21 03:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/22/21 13:16	09/24/21 03:24	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/22/21 13:16	09/24/21 03:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	09/22/21 13:16	09/24/21 03:24	1
1,4-Difluorobenzene (Surr)	78		70 - 130	09/22/21 13:16	09/24/21 03:24	1

Lab Sample ID: LCS 880-8263/1-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8262 **Prep Batch: 8263**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09072		mg/Kg		91	70 - 130		
Toluene			0.100	0.09667		mg/Kg		97	70 - 130		
Ethylbenzene			0.100	0.1013		mg/Kg		101	70 - 130		
m-Xylene & p-Xylene			0.200	0.2132		mg/Kg		107	70 - 130		
o-Xylene			0.100	0.1075		mg/Kg		108	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	128		70 - 130
1,4-Difluorobenzene (Surr)	71		70 - 130

Lab Sample ID: LCSD 880-8263/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8262 **Prep Batch: 8263**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08034		mg/Kg		80	70 - 130	12	35
Toluene			0.100	0.08706		mg/Kg		87	70 - 130	10	35
Ethylbenzene			0.100	0.09732		mg/Kg		97	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.2042		mg/Kg		102	70 - 130	4	35
o-Xylene			0.100	0.1036		mg/Kg		104	70 - 130	4	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	129		70 - 130

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1285-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

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

Lab Sample ID: LCSD 880-8263/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8262 **Prep Batch: 8263**

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,4-Difluorobenzene (Surr)	79		70 - 130

Lab Sample ID: 890-1285-2 MS **Client Sample ID: PH03A**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8262 **Prep Batch: 8263**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00199	U F2 F1	0.100	0.03895	F1	mg/Kg		39	70 - 130
Toluene	<0.00199	U F2 F1	0.100	0.04917	F1	mg/Kg		49	70 - 130
Ethylbenzene	<0.00199	U F1	0.100	0.05776	F1	mg/Kg		58	70 - 130
m-Xylene & p-Xylene	<0.00398	U F2 F1	0.200	0.1141	F1	mg/Kg		57	70 - 130
o-Xylene	<0.00199	U F1	0.100	0.05958	F1	mg/Kg		60	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	123		70 - 130
1,4-Difluorobenzene (Surr)	64	S1-	70 - 130

Lab Sample ID: 890-1285-2 MSD **Client Sample ID: PH03A**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8262 **Prep Batch: 8263**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U F2 F1	0.0998	0.07229	F2	mg/Kg		72	70 - 130	60	35
Toluene	<0.00199	U F2 F1	0.0998	0.07795	F2	mg/Kg		78	70 - 130	45	35
Ethylbenzene	<0.00199	U F1	0.0998	0.08024		mg/Kg		80	70 - 130	33	35
m-Xylene & p-Xylene	<0.00398	U F2 F1	0.200	0.1664	F2	mg/Kg		83	70 - 130	37	35
o-Xylene	<0.00199	U F1	0.0998	0.08481		mg/Kg		85	70 - 130	35	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	123		70 - 130
1,4-Difluorobenzene (Surr)	81		70 - 130

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

Lab Sample ID: MB 880-8211/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8177 **Prep Batch: 8211**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/21/21 14:36	09/21/21 20:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/21/21 14:36	09/21/21 20:21	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/21/21 14:36	09/21/21 20:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	09/21/21 14:36	09/21/21 20:21	1
o-Terphenyl	114		70 - 130	09/21/21 14:36	09/21/21 20:21	1

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QC Sample Results

Client: WSP USA Inc. Job ID: 890-1285-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

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

Lab Sample ID: LCS 880-8211/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8177 **Prep Batch: 8211**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1046		mg/Kg		105	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1026		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*103*		*70 - 130*

Lab Sample ID: LCSD 880-8211/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8177 **Prep Batch: 8211**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1034		mg/Kg		103	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1071		mg/Kg		107	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*109*		*70 - 130*

Lab Sample ID: 890-1285-1 MS **Client Sample ID: PH03**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8177 **Prep Batch: 8211**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	997	905.8		mg/Kg		88	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.8	U	997	897.8		mg/Kg		88	70 - 130		

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

Lab Sample ID: 890-1285-1 MSD **Client Sample ID: PH03**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8177 **Prep Batch: 8211**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	999	1026		mg/Kg		100	70 - 130	12	20
Diesel Range Organics (Over C10-C28)	<49.8	U	999	807.2		mg/Kg		79	70 - 130	11	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*90*		*70 - 130*

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1285-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

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

Lab Sample ID: 890-1285-1 MSD **Client Sample ID: PH03**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8177 **Prep Batch: 8211**

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	89		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-8255/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 8391

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/25/21 19:13	1

Lab Sample ID: LCS 880-8255/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 8391

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	268.0		mg/Kg		107	90 - 110		

Lab Sample ID: LCSD 880-8255/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 8391

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	268.2		mg/Kg		107	90 - 110	0	20

Lab Sample ID: 880-6300-A-1-C MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 8391

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	2660	F1	1240	4255	F1	mg/Kg		128	90 - 110		

Lab Sample ID: 880-6300-A-1-D MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 8391

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	2660	F1	1240	4182	F1	mg/Kg		122	90 - 110	2	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1285-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

GC VOA

Prep Batch: 8209

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-8209/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 8243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-8243/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-8243/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-8243/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1289-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 8251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1285-1	PH03	Total/NA	Solid	5035	
MB 880-8251/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-8251/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-8251/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-6278-A-71-D MS	Matrix Spike	Total/NA	Solid	5035	
880-6278-A-71-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 8262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1285-2	PH03A	Total/NA	Solid	8021B	8263
MB 880-8209/5-A	Method Blank	Total/NA	Solid	8021B	8209
MB 880-8263/5-A	Method Blank	Total/NA	Solid	8021B	8263
LCS 880-8263/1-A	Lab Control Sample	Total/NA	Solid	8021B	8263
LCSD 880-8263/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	8263
890-1285-2 MS	PH03A	Total/NA	Solid	8021B	8263
890-1285-2 MSD	PH03A	Total/NA	Solid	8021B	8263

Prep Batch: 8263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1285-2	PH03A	Total/NA	Solid	5035	
MB 880-8263/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-8263/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-8263/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1285-2 MS	PH03A	Total/NA	Solid	5035	
890-1285-2 MSD	PH03A	Total/NA	Solid	5035	

Analysis Batch: 8299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1285-1	PH03	Total/NA	Solid	8021B	8251
MB 880-8243/5-A	Method Blank	Total/NA	Solid	8021B	8243
MB 880-8251/5-A	Method Blank	Total/NA	Solid	8021B	8251
LCS 880-8243/1-A	Lab Control Sample	Total/NA	Solid	8021B	8243
LCS 880-8251/1-A	Lab Control Sample	Total/NA	Solid	8021B	8251
LCSD 880-8243/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	8243
LCSD 880-8251/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	8251
880-6278-A-71-D MS	Matrix Spike	Total/NA	Solid	8021B	8251
880-6278-A-71-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	8251
890-1289-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	8243

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1285-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

GC Semi VOA

Analysis Batch: 8177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1285-1	PH03	Total/NA	Solid	8015B NM	8211
890-1285-2	PH03A	Total/NA	Solid	8015B NM	8211
MB 880-8211/1-A	Method Blank	Total/NA	Solid	8015B NM	8211
LCS 880-8211/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	8211
LCSD 880-8211/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	8211
890-1285-1 MS	PH03	Total/NA	Solid	8015B NM	8211
890-1285-1 MSD	PH03	Total/NA	Solid	8015B NM	8211

Prep Batch: 8211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1285-1	PH03	Total/NA	Solid	8015NM Prep	
890-1285-2	PH03A	Total/NA	Solid	8015NM Prep	
MB 880-8211/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-8211/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-8211/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1285-1 MS	PH03	Total/NA	Solid	8015NM Prep	
890-1285-1 MSD	PH03	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 8255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1285-1	PH03	Soluble	Solid	DI Leach	
890-1285-2	PH03A	Soluble	Solid	DI Leach	
MB 880-8255/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-8255/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-8255/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-6300-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-6300-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 8391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1285-1	PH03	Soluble	Solid	300.0	8255
890-1285-2	PH03A	Soluble	Solid	300.0	8255
MB 880-8255/1-A	Method Blank	Soluble	Solid	300.0	8255
LCS 880-8255/2-A	Lab Control Sample	Soluble	Solid	300.0	8255
LCSD 880-8255/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	8255
880-6300-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	8255
880-6300-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	8255

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1285-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

Client Sample ID: PH03 Lab Sample ID: 890-1285-1

Date Collected: 09/17/21 14:44 **Matrix: Solid**
Date Received: 09/20/21 12:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			8251	09/22/21 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	8299	09/24/21 07:06	MR	XEN MID
Total/NA	Prep	8015NM Prep			8211	09/21/21 14:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1	8177	09/21/21 21:21	AJ	XEN MID
Soluble	Leach	DI Leach			8255	09/22/21 10:00	CH	XEN MID
Soluble	Analysis	300.0		1	8391	09/25/21 20:46	CH	XEN MID

Client Sample ID: PH03A Lab Sample ID: 890-1285-2

Date Collected: 09/17/21 14:59 **Matrix: Solid**
Date Received: 09/20/21 12:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			8263	09/22/21 13:16	KL	XEN MID
Total/NA	Analysis	8021B		1	8262	09/24/21 03:45	MR	XEN MID
Total/NA	Prep	8015NM Prep			8211	09/21/21 14:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1	8177	09/21/21 22:22	AJ	XEN MID
Soluble	Leach	DI Leach			8255	09/22/21 10:00	CH	XEN MID
Soluble	Analysis	300.0		1	8391	09/25/21 20:53	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: 890-1285-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

Laboratory: Eurofins Xenco, Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

Method Summary

Client: WSP USA Inc. Job ID: 890-1285-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (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.

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 Remuda Basin 4-24-30

Job ID: 890-1285-1
SDG: 31403236.020.0129 Task 07.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1285-1	PH03	Solid	09/17/21 14:44	09/20/21 12:49	1
890-1285-2	PH03A	Solid	09/17/21 14:59	09/20/21 12:49	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: _____

www.xenco.com Page 1 of 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:		luis.delval@wsp.com; tacoma.morrissey@wsp.com

Work Order Comments

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

Project Name:	PLU Remuda Basin 4-24-30	Turn Around	
Project Number:	31403236.020.0129 Task 07.02	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Luis Del Val	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	3.2/3.0	Thermometer ID	TNM007	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH03	S	9/17/2021	1444	1'	1	X	X	X
PH03A	S	9/17/2021	1459	4'	1	X	X	X

ANALYSIS REQUEST

890-1285 Chain of Custody

Work Order Notes

Inidcent #'s:
NAPP2120846562
NAPP2120034052

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		9.20.21 1247	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Received by OCD: 10/13/2021 2:52:32 PM
Released to Imaging: 3/9/2022 4:46:07 PM
9/28/2021
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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

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-419 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 #: 890-1285-1
Address: 1211 W Florida Ave	Due Date Requested: 9/24/2021			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: PLU Remuda Basin 4-24-30	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	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
PH03 (890-1285-1)	9/17/21	14 44 Mountain		Solid			X	X	X	1	
PH03A (890-1285-2)	9/17/21	14 59 Mountain		Solid			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
Clue Corp 9.20.21				9/21/21 11:15	Xenco
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: 10/13/2021 2:52:32 PM

Released to Imaging: 3/9/2022 4:46:07 PM

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1285-1
SDG Number: 31403236.020.0129 Task 07.02

Login Number: 1285
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: 890-1285-1
SDG Number: 31403236.020.0129 Task 07.02

Login Number: 1285
List Number: 2
Creator: Lowe, Katie

List Source: Eurofins Xenco, Midland
List Creation: 09/21/21 11:35 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: 890-1286-1
Laboratory SDG: 31403236.020.0129 Task 07.02
Client Project/Site: PLU Remuda Basin 4-24-30

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
9/28/2021 8:48:53 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 Remuda Basin 4-24-30

Laboratory Job ID: 890-1286-1
SDG: 31403236.020.0129 Task 07.02

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1286-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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: 890-1286-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

Job ID: 890-1286-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1286-1

Receipt
The samples were received on 9/20/2021 12:49 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 3.0°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-8132 and analytical batch 880-8212 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: PH02A (890-1286-4) and (880-6276-A-11-D). 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 880-8210 and analytical batch 880-8175 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
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-8255 and analytical batch 880-8391 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 Remuda Basin 4-24-30

Job ID: 890-1286-1
SDG: 31403236.020.0129 Task 07.02

Client Sample ID: PH01

Date Collected: 09/17/21 13:11
Date Received: 09/20/21 12:49
Sample Depth: 1

Lab Sample ID: 890-1286-1
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		09/21/21 09:30	09/22/21 12:45	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/21/21 09:30	09/22/21 12:45	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/21/21 09:30	09/22/21 12:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/21/21 09:30	09/22/21 12:45	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/21/21 09:30	09/22/21 12:45	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/21/21 09:30	09/22/21 12:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*09/21/21 09:30*	*09/22/21 12:45*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*09/21/21 09:30*	*09/22/21 12:45*	*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		09/21/21 14:14	09/22/21 03:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/21/21 14:14	09/22/21 03:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/21/21 14:14	09/22/21 03:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*09/21/21 14:14*	*09/22/21 03:03*	*1*
o-Terphenyl	*103*		*70 - 130*	*09/21/21 14:14*	*09/22/21 03:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**572**	**F1**	25.0		mg/Kg			09/27/21 17:36	5

Client Sample ID: PH01A

Date Collected: 09/17/21 13:53
Date Received: 09/20/21 12:49
Sample Depth: 4

Lab Sample ID: 890-1286-2
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		09/21/21 09:30	09/22/21 11:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/21 09:30	09/22/21 11:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/21/21 09:30	09/22/21 11:44	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/21/21 09:30	09/22/21 11:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/21/21 09:30	09/22/21 11:44	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/21/21 09:30	09/22/21 11:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*09/21/21 09:30*	*09/22/21 11:44*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*09/21/21 09:30*	*09/22/21 11:44*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/21/21 14:14	09/22/21 03:23	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/21/21 14:14	09/22/21 03:23	1

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Client Sample Results

Client: WSP USA Inc. Job ID: 890-1286-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

Client Sample ID: PH01A
Lab Sample ID: 890-1286-2
Date Collected: 09/17/21 13:53
Matrix: Solid
Date Received: 09/20/21 12:49
Sample Depth: 4

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/21/21 14:14	09/22/21 03:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*09/21/21 14:14*	*09/22/21 03:23*	*1*
o-Terphenyl	*105*		*70 - 130*	*09/21/21 14:14*	*09/22/21 03:23*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**33.9**		5.02		mg/Kg			09/25/21 21:17	1

Client Sample ID: PH02
Lab Sample ID: 890-1286-3
Date Collected: 09/17/21 14:11
Matrix: Solid
Date Received: 09/20/21 12:49
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/21/21 09:30	09/22/21 12:04	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/21/21 09:30	09/22/21 12:04	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/21/21 09:30	09/22/21 12:04	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		09/21/21 09:30	09/22/21 12:04	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/21/21 09:30	09/22/21 12:04	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		09/21/21 09:30	09/22/21 12:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*09/21/21 09:30*	*09/22/21 12:04*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*09/21/21 09:30*	*09/22/21 12:04*	*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		09/21/21 14:14	09/22/21 03:43	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/21/21 14:14	09/22/21 03:43	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/21/21 14:14	09/22/21 03:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*09/21/21 14:14*	*09/22/21 03:43*	*1*
o-Terphenyl	*101*		*70 - 130*	*09/21/21 14:14*	*09/22/21 03:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14.8**		4.98		mg/Kg			09/25/21 21:23	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1286-1
SDG: 31403236.020.0129 Task 07.02

Client Sample ID: PH02A
Date Collected: 09/17/21 14:22
Date Received: 09/20/21 12:49
Sample Depth: 4

Lab Sample ID: 890-1286-4
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		09/21/21 09:30	09/22/21 12:24	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/21/21 09:30	09/22/21 12:24	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/21/21 09:30	09/22/21 12:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/21/21 09:30	09/22/21 12:24	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/21/21 09:30	09/22/21 12:24	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/21/21 09:30	09/22/21 12:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*133*	*S1+*	*70 - 130*	*09/21/21 09:30*	*09/22/21 12:24*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*09/21/21 09:30*	*09/22/21 12:24*	*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	<50.0	U	50.0		mg/Kg		09/21/21 14:14	09/22/21 04:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/21/21 14:14	09/22/21 04:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/21/21 14:14	09/22/21 04:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*09/21/21 14:14*	*09/22/21 04:04*	*1*
o-Terphenyl	*103*		*70 - 130*	*09/21/21 14:14*	*09/22/21 04:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**33.2**		4.95		mg/Kg			09/25/21 21:42	1

Surrogate Summary

Client: WSP USA Inc. Job ID: 890-1286-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-6276-A-11-B MS	Matrix Spike	119	79										
880-6276-A-11-C MSD	Matrix Spike Duplicate	117	76										
890-1286-1	PH01	126	78										
890-1286-2	PH01A	130	83										
890-1286-3	PH02	125	79										
890-1286-4	PH02A	133 S1+	77										
LCS 880-8132/1-B	Lab Control Sample	112	73										
LCSD 880-8132/2-B	Lab Control Sample Dup	111	81										
MB 880-8102/5-B	Method Blank	109	75										
MB 880-8132/5-B	Method Blank	119	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)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-1267-A-1-I MS	Matrix Spike	93	90										
890-1267-A-1-J MSD	Matrix Spike Duplicate	96	94										
890-1286-1	PH01	104	103										
890-1286-2	PH01A	107	105										
890-1286-3	PH02	103	101										
890-1286-4	PH02A	104	103										
LCS 880-8210/2-A	Lab Control Sample	93	86										
LCSD 880-8210/3-A	Lab Control Sample Dup	95	88										
MB 880-8210/1-A	Method Blank	93	92										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1286-1
SDG: 31403236.020.0129 Task 07.02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-8102/5-B
Matrix: Solid
Analysis Batch: 8212

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8102

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/21 09:40	09/21/21 18:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/21 09:40	09/21/21 18:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/21/21 09:40	09/21/21 18:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/21/21 09:40	09/21/21 18:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/21/21 09:40	09/21/21 18:03	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/21/21 09:40	09/21/21 18:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*09/21/21 09:40*	*09/21/21 18:03*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*09/21/21 09:40*	*09/21/21 18:03*	*1*

Lab Sample ID: MB 880-8132/5-B
Matrix: Solid
Analysis Batch: 8212

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8132

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/21/21 09:30	09/22/21 04:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/21/21 09:30	09/22/21 04:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/21/21 09:30	09/22/21 04:54	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/21/21 09:30	09/22/21 04:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/21/21 09:30	09/22/21 04:54	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/21/21 09:30	09/22/21 04:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*09/21/21 09:30*	*09/22/21 04:54*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*09/21/21 09:30*	*09/22/21 04:54*	*1*

Lab Sample ID: LCS 880-8132/1-B
Matrix: Solid
Analysis Batch: 8212

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8132

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08695		mg/Kg		87	70 - 130		
Toluene			0.100	0.08872		mg/Kg		89	70 - 130		
Ethylbenzene			0.100	0.08942		mg/Kg		89	70 - 130		
m-Xylene & p-Xylene			0.200	0.1865		mg/Kg		93	70 - 130		
o-Xylene			0.100	0.09687		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*73*		*70 - 130*

Lab Sample ID: LCSD 880-8132/2-B
Matrix: Solid
Analysis Batch: 8212

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 8132

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08927		mg/Kg		89	70 - 130	3	35

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QC Sample Results

Client: WSP USA Inc. Job ID: 890-1286-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

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

Lab Sample ID: LCSD 880-8132/2-B **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8212 **Prep Batch: 8132**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.09043		mg/Kg		90	70 - 130	2	35
Ethylbenzene			0.100	0.09260		mg/Kg		93	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1933		mg/Kg		97	70 - 130	4	35
o-Xylene			0.100	0.1002		mg/Kg		100	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*

Lab Sample ID: 880-6276-A-11-B MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8212 **Prep Batch: 8132**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U F1	0.0990	0.06772	F1	mg/Kg		68	70 - 130
Toluene	<0.00200	U F1	0.0990	0.06664	F1	mg/Kg		67	70 - 130
Ethylbenzene	<0.00200	U F1	0.0990	0.06261	F1	mg/Kg		63	70 - 130
m-Xylene & p-Xylene	<0.00399	U F1	0.198	0.1325	F1	mg/Kg		67	70 - 130
o-Xylene	<0.00200	U F1	0.0990	0.06732	F1	mg/Kg		68	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*

Lab Sample ID: 880-6276-A-11-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8212 **Prep Batch: 8132**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.0996	0.06978		mg/Kg		70	70 - 130	3	35
Toluene	<0.00200	U F1	0.0996	0.06999		mg/Kg		70	70 - 130	5	35
Ethylbenzene	<0.00200	U F1	0.0996	0.06560	F1	mg/Kg		66	70 - 130	5	35
m-Xylene & p-Xylene	<0.00399	U F1	0.199	0.1391		mg/Kg		70	70 - 130	5	35
o-Xylene	<0.00200	U F1	0.0996	0.07017		mg/Kg		70	70 - 130	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*

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

Lab Sample ID: MB 880-8210/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8175 **Prep Batch: 8210**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/21/21 14:14	09/21/21 20:21	1

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1286-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

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

Lab Sample ID: MB 880-8210/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8175 **Prep Batch: 8210**

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		09/21/21 14:14	09/21/21 20:21	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/21/21 14:14	09/21/21 20:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*09/21/21 14:14*	*09/21/21 20:21*	*1*
o-Terphenyl	*92*		*70 - 130*	*09/21/21 14:14*	*09/21/21 20:21*	*1*

Lab Sample ID: LCS 880-8210/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8175 **Prep Batch: 8210**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	862.4		mg/Kg		86	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	855.3		mg/Kg		86	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*86*		*70 - 130*

Lab Sample ID: LCSD 880-8210/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8175 **Prep Batch: 8210**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	816.1		mg/Kg		82	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	876.2		mg/Kg		88	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

Lab Sample ID: 890-1267-A-1-I MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8175 **Prep Batch: 8210**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F1	997	<49.9	U F1	mg/Kg		0.4	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.8	U F1	997	<49.9	U F1	mg/Kg		0.5	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*90*		*70 - 130*

QC Sample Results

Client: WSP USA Inc. Job ID: 890-1286-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

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

Lab Sample ID: 890-1267-A-1-J MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 8175 — **Prep Batch: 8210**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F1	999	<50.0	U F1	mg/Kg		0.8	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	<49.8	U F1	999	<50.0	U F1	mg/Kg		0.7	70 - 130	8	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*94*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-8255/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 8391

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/25/21 19:13	1

Lab Sample ID: LCS 880-8255/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 8391

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	268.0		mg/Kg		107	90 - 110		

Lab Sample ID: LCSD 880-8255/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 8391

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	268.2		mg/Kg		107	90 - 110	0	20

Lab Sample ID: 890-1286-1 MS — **Client Sample ID: PH01**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 8391

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	572	F1	50000	1988	F1	mg/Kg		3	90 - 110		

Lab Sample ID: 890-1286-1 MSD — **Client Sample ID: PH01**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 8391

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	572	F1	1250	1968	F1	mg/Kg		112	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1286-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

GC VOA

Prep Batch: 8102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-8102/5-B	Method Blank	Total/NA	Solid	5035	

Prep Batch: 8132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1286-1	PH01	Total/NA	Solid	5035	
890-1286-2	PH01A	Total/NA	Solid	5035	
890-1286-3	PH02	Total/NA	Solid	5035	
890-1286-4	PH02A	Total/NA	Solid	5035	
MB 880-8132/5-B	Method Blank	Total/NA	Solid	5035	
LCS 880-8132/1-B	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-8132/2-B	Lab Control Sample Dup	Total/NA	Solid	5035	
880-6276-A-11-B MS	Matrix Spike	Total/NA	Solid	5035	
880-6276-A-11-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 8212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1286-1	PH01	Total/NA	Solid	8021B	8132
890-1286-2	PH01A	Total/NA	Solid	8021B	8132
890-1286-3	PH02	Total/NA	Solid	8021B	8132
890-1286-4	PH02A	Total/NA	Solid	8021B	8132
MB 880-8102/5-B	Method Blank	Total/NA	Solid	8021B	8102
MB 880-8132/5-B	Method Blank	Total/NA	Solid	8021B	8132
LCS 880-8132/1-B	Lab Control Sample	Total/NA	Solid	8021B	8132
LCSD 880-8132/2-B	Lab Control Sample Dup	Total/NA	Solid	8021B	8132
880-6276-A-11-B MS	Matrix Spike	Total/NA	Solid	8021B	8132
880-6276-A-11-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	8132

GC Semi VOA

Analysis Batch: 8175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1286-1	PH01	Total/NA	Solid	8015B NM	8210
890-1286-2	PH01A	Total/NA	Solid	8015B NM	8210
890-1286-3	PH02	Total/NA	Solid	8015B NM	8210
890-1286-4	PH02A	Total/NA	Solid	8015B NM	8210
MB 880-8210/1-A	Method Blank	Total/NA	Solid	8015B NM	8210
LCS 880-8210/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	8210
LCSD 880-8210/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	8210
890-1267-A-1-I MS	Matrix Spike	Total/NA	Solid	8015B NM	8210
890-1267-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	8210

Prep Batch: 8210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1286-1	PH01	Total/NA	Solid	8015NM Prep	
890-1286-2	PH01A	Total/NA	Solid	8015NM Prep	
890-1286-3	PH02	Total/NA	Solid	8015NM Prep	
890-1286-4	PH02A	Total/NA	Solid	8015NM Prep	
MB 880-8210/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-8210/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-8210/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1267-A-1-I MS	Matrix Spike	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1286-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

GC Semi VOA (Continued)

Prep Batch: 8210 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1267-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 8255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1286-1	PH01	Soluble	Solid	DI Leach	
890-1286-2	PH01A	Soluble	Solid	DI Leach	
890-1286-3	PH02	Soluble	Solid	DI Leach	
890-1286-4	PH02A	Soluble	Solid	DI Leach	
MB 880-8255/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-8255/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-8255/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1286-1 MS	PH01	Soluble	Solid	DI Leach	
890-1286-1 MSD	PH01	Soluble	Solid	DI Leach	

Analysis Batch: 8391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1286-1	PH01	Soluble	Solid	300.0	8255
890-1286-2	PH01A	Soluble	Solid	300.0	8255
890-1286-3	PH02	Soluble	Solid	300.0	8255
890-1286-4	PH02A	Soluble	Solid	300.0	8255
MB 880-8255/1-A	Method Blank	Soluble	Solid	300.0	8255
LCS 880-8255/2-A	Lab Control Sample	Soluble	Solid	300.0	8255
LCSD 880-8255/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	8255
890-1286-1 MS	PH01	Soluble	Solid	300.0	8255
890-1286-1 MSD	PH01	Soluble	Solid	300.0	8255

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1286-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

Client Sample ID: PH01 — Lab Sample ID: 890-1286-1

Date Collected: 09/17/21 13:11 **Matrix: Solid**
Date Received: 09/20/21 12:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			8132	09/21/21 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	8212	09/22/21 12:45	KL	XEN MID
Total/NA	Prep	8015NM Prep			8210	09/21/21 14:14	DM	XEN MID
Total/NA	Analysis	8015B NM		1	8175	09/22/21 03:03	AJ	XEN MID
Soluble	Leach	DI Leach			8255	09/22/21 10:00	CH	XEN MID
Soluble	Analysis	300.0		5	8391	09/27/21 17:36	CH	XEN MID

Client Sample ID: PH01A — Lab Sample ID: 890-1286-2

Date Collected: 09/17/21 13:53 **Matrix: Solid**
Date Received: 09/20/21 12:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			8132	09/21/21 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	8212	09/22/21 11:44	KL	XEN MID
Total/NA	Prep	8015NM Prep			8210	09/21/21 14:14	DM	XEN MID
Total/NA	Analysis	8015B NM		1	8175	09/22/21 03:23	AJ	XEN MID
Soluble	Leach	DI Leach			8255	09/22/21 10:00	CH	XEN MID
Soluble	Analysis	300.0		1	8391	09/25/21 21:17	CH	XEN MID

Client Sample ID: PH02 — Lab Sample ID: 890-1286-3

Date Collected: 09/17/21 14:11 **Matrix: Solid**
Date Received: 09/20/21 12:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			8132	09/21/21 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	8212	09/22/21 12:04	KL	XEN MID
Total/NA	Prep	8015NM Prep			8210	09/21/21 14:14	DM	XEN MID
Total/NA	Analysis	8015B NM		1	8175	09/22/21 03:43	AJ	XEN MID
Soluble	Leach	DI Leach			8255	09/22/21 10:00	CH	XEN MID
Soluble	Analysis	300.0		1	8391	09/25/21 21:23	CH	XEN MID

Client Sample ID: PH02A — Lab Sample ID: 890-1286-4

Date Collected: 09/17/21 14:22 **Matrix: Solid**
Date Received: 09/20/21 12:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			8132	09/21/21 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	8212	09/22/21 12:24	KL	XEN MID
Total/NA	Prep	8015NM Prep			8210	09/21/21 14:14	DM	XEN MID
Total/NA	Analysis	8015B NM		1	8175	09/22/21 04:04	AJ	XEN MID
Soluble	Leach	DI Leach			8255	09/22/21 10:00	CH	XEN MID
Soluble	Analysis	300.0		1	8391	09/25/21 21:42	CH	XEN MID

Laboratory References:

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

Eurofins Xenco, Carlsbad

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-1286-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

Laboratory: Eurofins Xenco, Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

Method Summary

Client: WSP USA Inc. Job ID: 890-1286-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129 Task 07.02

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (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.

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 Remuda Basin 4-24-30

Job ID: 890-1286-1
SDG: 31403236.020.0129 Task 07.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1286-1	PH01	Solid	09/17/21 13:11	09/20/21 12:49	1
890-1286-2	PH01A	Solid	09/17/21 13:53	09/20/21 12:49	4
890-1286-3	PH02	Solid	09/17/21 14:11	09/20/21 12:49	1
890-1286-4	PH02A	Solid	09/17/21 14:22	09/20/21 12:49	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.	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:	luis.delval@wsp.com; tacoma.morrissey@wsp.com

Work Order Comments

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

Project Name:	PLU Remuda Basin 4-24-30	Turn Around	
Project Number:	31403236.020.0129 Task 07.02	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Luis Del Val	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	3.2/3.0	Thermometer ID	TMH007	
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

890-1286 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH01	S	9/17/2021	1311	1'	1	X	X	X
PH01A	S	9/17/2021	1353	4'	1	X	X	X
PH02	S	9/17/2021	1411	1'	1	X	X	X
PH02A	S	9/17/2021	1422	4'	1	X	X	X

Work Order Notes

Inidcent #'s:
NAPP2120846562
NAPP2120034052

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		9.20.21 1249	2		
3			4		
5			6		

Revised Date 051418 Rev 2018 1

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Received by OCD: 10/13/2021 2:52:32 PM

Released to Imaging: 3/9/2022 4:46:07 PM

9/28/2021

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: 890-419 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 #: 890-1286-1
Address: 1211 W Florida Ave	Due Date Requested: 9/24/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: PLU Remuda Basin 4-24-30	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	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
PH01 (890-1286-1)	9/17/21	13 11 Mountain		Solid			X	X	X	1	
PH01A (890-1286-2)	9/17/21	13 53 Mountain		Solid			X	X	X	1	
PH02 (890-1286-3)	9/17/21	14 11 Mountain		Solid			X	X	X	1	
PH02A (890-1286-4)	9/17/21	14 22 Mountain		Solid			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 Cuf 9.20.21	Date/Time:	Company	Received by:	Date/Time: 9/21/21 11:15	Company: Xenco.
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company

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

Ver: 06/08/2021

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9/28/2021
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Released to Imaging: 3/9/2022 4:46:07 PM

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1286-1
SDG Number: 31403236.020.0129 Task 07.02

Login Number: 1286
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: 890-1286-1
SDG Number: 31403236.020.0129 Task 07.02

Login Number: 1286
List Number: 2
Creator: Lowe, Katie

List Source: Eurofins Xenco, Midland
List Creation: 09/21/21 11:35 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: 890-1353-1
Laboratory Sample Delivery Group: 31403236.020.0129
Client Project/Site: PLU Remuda Basin 4-24-30
Revision: 1

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

Attn: Dan Moir

JKramer

Authorized for release by:
10/13/2021 8:20:59 AM

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

LINKS

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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 Remuda Basin 4-24-30

Laboratory Job ID: 890-1353-1
SDG: 31403236.020.0129

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1353-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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 Remuda Basin 4-24-30

Job ID: 890-1353-1
SDG: 31403236.020.0129

Job ID: 890-1353-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1353-1

REVISION

The report being provided is a revision of the original report sent on 10/11/2021. The report (revision 1) is being revised due to Per client email, corrected sample depth for BH03A from .0 to 4.0.

Report revision history

Receipt
The samples were received on 10/4/2021 1:57 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 4.2°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
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 Remuda Basin 4-24-30

Job ID: 890-1353-1
SDG: 31403236.020.0129

Client Sample ID: BH03

Date Collected: 10/04/21 09:13
Date Received: 10/04/21 13:57
Sample Depth: 1.0

Lab Sample ID: 890-1353-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/07/21 14:40	10/08/21 06:38	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/07/21 14:40	10/08/21 06:38	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/07/21 14:40	10/08/21 06:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/07/21 14:40	10/08/21 06:38	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/07/21 14:40	10/08/21 06:38	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/07/21 14:40	10/08/21 06:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*10/07/21 14:40*	*10/08/21 06:38*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*10/07/21 14:40*	*10/08/21 06:38*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/07/21 12:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/07/21 09:20	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		10/09/21 13:16	10/11/21 11:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/09/21 13:16	10/11/21 11:54	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/09/21 13:16	10/11/21 11:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*10/09/21 13:16*	*10/11/21 11:54*	*1*
o-Terphenyl	*110*		*70 - 130*	*10/09/21 13:16*	*10/11/21 11:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10600**		101		mg/Kg			10/08/21 09:16	20

Client Sample ID: BH03A

Date Collected: 10/04/21 09:20
Date Received: 10/04/21 13:57
Sample Depth: 4.0

Lab Sample ID: 890-1353-2

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		10/07/21 14:40	10/08/21 06:58	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/07/21 14:40	10/08/21 06:58	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/07/21 14:40	10/08/21 06:58	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/07/21 14:40	10/08/21 06:58	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/07/21 14:40	10/08/21 06:58	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/07/21 14:40	10/08/21 06:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*10/07/21 14:40*	*10/08/21 06:58*	*1*

Client Sample Results

Client: WSP USA Inc. Job ID: 890-1353-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

Client Sample ID: BH03A
Lab Sample ID: 890-1353-2
Date Collected: 10/04/21 09:20
Matrix: Solid
Date Received: 10/04/21 13:57
Sample Depth: 4.0

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*10/07/21 14:40*	*10/08/21 06:58*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/07/21 12:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			10/07/21 09:20	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		10/09/21 13:16	10/11/21 18:42	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		10/09/21 13:16	10/11/21 18:42	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/09/21 13:16	10/11/21 18:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*10/09/21 13:16*	*10/11/21 18:42*	*1*
o-Terphenyl	*105*		*70 - 130*	*10/09/21 13:16*	*10/11/21 18:42*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**245**		4.99		mg/Kg			10/08/21 09:33	1

Client Sample ID: BH02
Lab Sample ID: 890-1353-3
Date Collected: 10/04/21 09:51
Matrix: Solid
Date Received: 10/04/21 13:57
Sample Depth: 3.0

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/07/21 14:40	10/08/21 07:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/07/21 14:40	10/08/21 07:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/07/21 14:40	10/08/21 07:19	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		10/07/21 14:40	10/08/21 07:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/07/21 14:40	10/08/21 07:19	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		10/07/21 14:40	10/08/21 07:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*10/07/21 14:40*	*10/08/21 07:19*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*10/07/21 14:40*	*10/08/21 07:19*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			10/07/21 12:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/07/21 09:20	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc. Job ID: 890-1353-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

Client Sample ID: BH02
Date Collected: 10/04/21 09:51
Date Received: 10/04/21 13:57
Sample Depth: 3.0

Lab Sample ID: 890-1353-3
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		10/09/21 13:16	10/11/21 19:02	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/09/21 13:16	10/11/21 19:02	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/09/21 13:16	10/11/21 19:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*10/09/21 13:16*	*10/11/21 19:02*	*1*
o-Terphenyl	*109*		*70 - 130*	*10/09/21 13:16*	*10/11/21 19:02*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2490**		24.8		mg/Kg			10/08/21 09:38	5

Client Sample ID: BH02A
Date Collected: 10/04/21 09:54
Date Received: 10/04/21 13:57
Sample Depth: 4.0

Lab Sample ID: 890-1353-4
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		10/07/21 14:40	10/08/21 07:39	1
Toluene	<0.00202	U	0.00202		mg/Kg		10/07/21 14:40	10/08/21 07:39	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		10/07/21 14:40	10/08/21 07:39	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		10/07/21 14:40	10/08/21 07:39	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		10/07/21 14:40	10/08/21 07:39	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		10/07/21 14:40	10/08/21 07:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*10/07/21 14:40*	*10/08/21 07:39*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*10/07/21 14:40*	*10/08/21 07:39*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			10/07/21 12:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			10/07/21 09:20	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		10/09/21 13:16	10/11/21 19:23	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		10/09/21 13:16	10/11/21 19:23	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/09/21 13:16	10/11/21 19:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*10/09/21 13:16*	*10/11/21 19:23*	*1*
o-Terphenyl	*111*		*70 - 130*	*10/09/21 13:16*	*10/11/21 19:23*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1353-1
SDG: 31403236.020.0129

Client Sample ID: BH02A
Date Collected: 10/04/21 09:54
Date Received: 10/04/21 13:57
Sample Depth: 4.0

Lab Sample ID: 890-1353-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2930		25.2		mg/Kg			10/08/21 09:44	5

Client Sample ID: SS03
Date Collected: 10/04/21 11:31
Date Received: 10/04/21 13:57
Sample Depth: 0.5

Lab Sample ID: 890-1353-5
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		10/07/21 14:40	10/08/21 07:59	1
Toluene	<0.00202	U	0.00202		mg/Kg		10/07/21 14:40	10/08/21 07:59	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		10/07/21 14:40	10/08/21 07:59	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		10/07/21 14:40	10/08/21 07:59	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		10/07/21 14:40	10/08/21 07:59	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		10/07/21 14:40	10/08/21 07:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*10/07/21 14:40*	*10/08/21 07:59*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*10/07/21 14:40*	*10/08/21 07:59*	*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			10/07/21 12:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/07/21 09:20	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		10/09/21 13:16	10/11/21 19:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/09/21 13:16	10/11/21 19:43	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/09/21 13:16	10/11/21 19:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*10/09/21 13:16*	*10/11/21 19:43*	*1*
o-Terphenyl	*106*		*70 - 130*	*10/09/21 13:16*	*10/11/21 19:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	40.0		5.04		mg/Kg			10/08/21 09:50	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1353-1
SDG: 31403236.020.0129

Client Sample ID: SS04

Date Collected: 10/04/21 11:39
Date Received: 10/04/21 13:57
Sample Depth: 0.5

Lab Sample ID: 890-1353-6

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		10/07/21 14:40	10/08/21 08:20	1
Toluene	<0.00202	U	0.00202		mg/Kg		10/07/21 14:40	10/08/21 08:20	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		10/07/21 14:40	10/08/21 08:20	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		10/07/21 14:40	10/08/21 08:20	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		10/07/21 14:40	10/08/21 08:20	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		10/07/21 14:40	10/08/21 08:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*10/07/21 14:40*	*10/08/21 08:20*	*1*
1,4-Difluorobenzene (Surr)	*63*	*S1-*	*70 - 130*	*10/07/21 14:40*	*10/08/21 08:20*	*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			10/07/21 12:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/07/21 09:20	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		10/09/21 13:16	10/11/21 14:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/09/21 13:16	10/11/21 14:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/09/21 13:16	10/11/21 14:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*10/09/21 13:16*	*10/11/21 14:25*	*1*
o-Terphenyl	*98*		*70 - 130*	*10/09/21 13:16*	*10/11/21 14:25*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.7**		5.05		mg/Kg			10/08/21 10:07	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1353-1
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)
890-1353-1	BH03	106	77
890-1353-1 MS	BH03	127	83
890-1353-1 MSD	BH03	118	85
890-1353-2	BH03A	117	82
890-1353-3	BH02	118	79
890-1353-4	BH02A	119	77
890-1353-5	SS03	113	76
890-1353-6	SS04	92	63 S1-
LCS 880-9069/1-A	Lab Control Sample	113	87
LCSD 880-9069/2-A	Lab Control Sample Dup	123	86
MB 880-9035/5-A	Method Blank	103	80
MB 880-9069/5-A	Method Blank	103	80

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)
890-1353-1	BH03	97	110
890-1353-1 MS	BH03	99	100
890-1353-1 MSD	BH03	93	93
890-1353-2	BH03A	95	105
890-1353-3	BH02	97	109
890-1353-4	BH02A	99	111
890-1353-5	SS03	96	106
890-1353-6	SS04	92	98
LCS 880-9164/2-A	Lab Control Sample	91	88
LCSD 880-9164/3-A	Lab Control Sample Dup	83	81
MB 880-9164/1-A	Method Blank	102	119

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1353-1
SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-9035/5-A
Matrix: Solid
Analysis Batch: 9047

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9035

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/07/21 08:49	10/07/21 19:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/07/21 08:49	10/07/21 19:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/07/21 08:49	10/07/21 19:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/07/21 08:49	10/07/21 19:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/07/21 08:49	10/07/21 19:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/07/21 08:49	10/07/21 19:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*10/07/21 08:49*	*10/07/21 19:22*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*10/07/21 08:49*	*10/07/21 19:22*	*1*

Lab Sample ID: MB 880-9069/5-A
Matrix: Solid
Analysis Batch: 9047

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9069

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/07/21 14:40	10/08/21 06:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/07/21 14:40	10/08/21 06:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/07/21 14:40	10/08/21 06:16	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/07/21 14:40	10/08/21 06:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/07/21 14:40	10/08/21 06:16	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/07/21 14:40	10/08/21 06:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*10/07/21 14:40*	*10/08/21 06:16*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*10/07/21 14:40*	*10/08/21 06:16*	*1*

Lab Sample ID: LCS 880-9069/1-A
Matrix: Solid
Analysis Batch: 9047

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9069

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09126		mg/Kg		91	70 - 130		
Toluene			0.100	0.08742		mg/Kg		87	70 - 130		
Ethylbenzene			0.100	0.09064		mg/Kg		91	70 - 130		
m-Xylene & p-Xylene			0.200	0.1872		mg/Kg		94	70 - 130		
o-Xylene			0.100	0.09372		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

Lab Sample ID: LCSD 880-9069/2-A
Matrix: Solid
Analysis Batch: 9047

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9069

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1017		mg/Kg		102	70 - 130	11	35

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1353-1
SDG: 31403236.020.0129

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

Lab Sample ID: LCSD 880-9069/2-A
Matrix: Solid
Analysis Batch: 9047

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9069

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.09904		mg/Kg		99	70 - 130	12	35
Ethylbenzene			0.100	0.1056		mg/Kg		106	70 - 130	15	35
m-Xylene & p-Xylene			0.200	0.2182		mg/Kg		109	70 - 130	15	35
o-Xylene			0.100	0.1101		mg/Kg		110	70 - 130	16	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*

Lab Sample ID: 890-1353-1 MS
Matrix: Solid
Analysis Batch: 9047

Client Sample ID: BH03
Prep Type: Total/NA
Prep Batch: 9069

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00199	U	0.0990	0.09688		mg/Kg		98	70 - 130
Toluene	<0.00199	U	0.0990	0.09928		mg/Kg		100	70 - 130
Ethylbenzene	<0.00199	U	0.0990	0.1059		mg/Kg		107	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.198	0.2199		mg/Kg		111	70 - 130
o-Xylene	<0.00199	U	0.0990	0.1119		mg/Kg		113	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*

Lab Sample ID: 890-1353-1 MSD
Matrix: Solid
Analysis Batch: 9047

Client Sample ID: BH03
Prep Type: Total/NA
Prep Batch: 9069

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.101	0.09552		mg/Kg		95	70 - 130	1	35
Toluene	<0.00199	U	0.101	0.09546		mg/Kg		95	70 - 130	4	35
Ethylbenzene	<0.00199	U	0.101	0.1006		mg/Kg		100	70 - 130	5	35
m-Xylene & p-Xylene	<0.00398	U	0.202	0.2099		mg/Kg		104	70 - 130	5	35
o-Xylene	<0.00199	U	0.101	0.1060		mg/Kg		105	70 - 130	5	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*

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

Lab Sample ID: MB 880-9164/1-A
Matrix: Solid
Analysis Batch: 9176

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9164

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		10/09/21 13:16	10/11/21 10:51	1

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1353-1
SDG: 31403236.020.0129

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

Lab Sample ID: MB 880-9164/1-A
Matrix: Solid
Analysis Batch: 9176

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 9164

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/09/21 13:16	10/11/21 10:51	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/09/21 13:16	10/11/21 10:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*10/09/21 13:16*	*10/11/21 10:51*	*1*
o-Terphenyl	*119*		*70 - 130*	*10/09/21 13:16*	*10/11/21 10:51*	*1*

Lab Sample ID: LCS 880-9164/2-A
Matrix: Solid
Analysis Batch: 9176

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 9164

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1167		mg/Kg		117	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	878.9		mg/Kg		88	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*91*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

Lab Sample ID: LCSD 880-9164/3-A
Matrix: Solid
Analysis Batch: 9176

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 9164

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1075		mg/Kg		108	70 - 130	8	20
Diesel Range Organics (Over C10-C28)			1000	865.7		mg/Kg		87	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*83*		*70 - 130*
o-Terphenyl	*81*		*70 - 130*

Lab Sample ID: 890-1353-1 MS
Matrix: Solid
Analysis Batch: 9176

Client Sample ID: BH03
Prep Type: Total/NA
Prep Batch: 9164

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	1170		mg/Kg		114	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	997	915.8		mg/Kg		90	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*100*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1353-1
SDG: 31403236.020.0129

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

Lab Sample ID: 890-1353-1 MSD — **Client Sample ID: BH03**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 9176 — **Prep Batch: 9164**

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	1210		mg/Kg		117	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	859.0		mg/Kg		84	70 - 130	6	20

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-9095/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 9098

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			10/08/21 08:59	1

Lab Sample ID: LCS 880-9095/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 9098

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	247.1		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-9095/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 9098

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	247.6		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 890-1353-1 MS — **Client Sample ID: BH03**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 9098

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	10600		5050	15860		mg/Kg		105	90 - 110		

Lab Sample ID: 890-1353-1 MSD — **Client Sample ID: BH03**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 9098

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10600		5050	15920		mg/Kg		106	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1353-1
SDG: 31403236.020.0129

GC VOA

Prep Batch: 9035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-9035/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 9047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1353-1	BH03	Total/NA	Solid	8021B	9069
890-1353-2	BH03A	Total/NA	Solid	8021B	9069
890-1353-3	BH02	Total/NA	Solid	8021B	9069
890-1353-4	BH02A	Total/NA	Solid	8021B	9069
890-1353-5	SS03	Total/NA	Solid	8021B	9069
890-1353-6	SS04	Total/NA	Solid	8021B	9069
MB 880-9035/5-A	Method Blank	Total/NA	Solid	8021B	9035
MB 880-9069/5-A	Method Blank	Total/NA	Solid	8021B	9069
LCS 880-9069/1-A	Lab Control Sample	Total/NA	Solid	8021B	9069
LCSD 880-9069/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	9069
890-1353-1 MS	BH03	Total/NA	Solid	8021B	9069
890-1353-1 MSD	BH03	Total/NA	Solid	8021B	9069

Analysis Batch: 9062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1353-1	BH03	Total/NA	Solid	Total BTEX	
890-1353-2	BH03A	Total/NA	Solid	Total BTEX	
890-1353-3	BH02	Total/NA	Solid	Total BTEX	
890-1353-4	BH02A	Total/NA	Solid	Total BTEX	
890-1353-5	SS03	Total/NA	Solid	Total BTEX	
890-1353-6	SS04	Total/NA	Solid	Total BTEX	

Prep Batch: 9069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1353-1	BH03	Total/NA	Solid	5035	
890-1353-2	BH03A	Total/NA	Solid	5035	
890-1353-3	BH02	Total/NA	Solid	5035	
890-1353-4	BH02A	Total/NA	Solid	5035	
890-1353-5	SS03	Total/NA	Solid	5035	
890-1353-6	SS04	Total/NA	Solid	5035	
MB 880-9069/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-9069/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-9069/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1353-1 MS	BH03	Total/NA	Solid	5035	
890-1353-1 MSD	BH03	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 9044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1353-1	BH03	Total/NA	Solid	8015 NM	
890-1353-2	BH03A	Total/NA	Solid	8015 NM	
890-1353-3	BH02	Total/NA	Solid	8015 NM	
890-1353-4	BH02A	Total/NA	Solid	8015 NM	
890-1353-5	SS03	Total/NA	Solid	8015 NM	
890-1353-6	SS04	Total/NA	Solid	8015 NM	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1353-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

GC Semi VOA

Prep Batch: 9164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1353-1	BH03	Total/NA	Solid	8015NM Prep	
890-1353-2	BH03A	Total/NA	Solid	8015NM Prep	
890-1353-3	BH02	Total/NA	Solid	8015NM Prep	
890-1353-4	BH02A	Total/NA	Solid	8015NM Prep	
890-1353-5	SS03	Total/NA	Solid	8015NM Prep	
890-1353-6	SS04	Total/NA	Solid	8015NM Prep	
MB 880-9164/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-9164/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-9164/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1353-1 MS	BH03	Total/NA	Solid	8015NM Prep	
890-1353-1 MSD	BH03	Total/NA	Solid	8015NM Prep	

Analysis Batch: 9176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1353-1	BH03	Total/NA	Solid	8015B NM	9164
890-1353-2	BH03A	Total/NA	Solid	8015B NM	9164
890-1353-3	BH02	Total/NA	Solid	8015B NM	9164
890-1353-4	BH02A	Total/NA	Solid	8015B NM	9164
890-1353-5	SS03	Total/NA	Solid	8015B NM	9164
890-1353-6	SS04	Total/NA	Solid	8015B NM	9164
MB 880-9164/1-A	Method Blank	Total/NA	Solid	8015B NM	9164
LCS 880-9164/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	9164
LCSD 880-9164/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	9164
890-1353-1 MS	BH03	Total/NA	Solid	8015B NM	9164
890-1353-1 MSD	BH03	Total/NA	Solid	8015B NM	9164

HPLC/IC

Leach Batch: 9095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1353-1	BH03	Soluble	Solid	DI Leach	
890-1353-2	BH03A	Soluble	Solid	DI Leach	
890-1353-3	BH02	Soluble	Solid	DI Leach	
890-1353-4	BH02A	Soluble	Solid	DI Leach	
890-1353-5	SS03	Soluble	Solid	DI Leach	
890-1353-6	SS04	Soluble	Solid	DI Leach	
MB 880-9095/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-9095/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-9095/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1353-1 MS	BH03	Soluble	Solid	DI Leach	
890-1353-1 MSD	BH03	Soluble	Solid	DI Leach	

Analysis Batch: 9098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1353-1	BH03	Soluble	Solid	300.0	9095
890-1353-2	BH03A	Soluble	Solid	300.0	9095
890-1353-3	BH02	Soluble	Solid	300.0	9095
890-1353-4	BH02A	Soluble	Solid	300.0	9095
890-1353-5	SS03	Soluble	Solid	300.0	9095
890-1353-6	SS04	Soluble	Solid	300.0	9095
MB 880-9095/1-A	Method Blank	Soluble	Solid	300.0	9095

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1353-1
Project/Site: PLU Remuda Basin 4-24-30 SDG: 31403236.020.0129

HPLC/IC (Continued)

Analysis Batch: 9098 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-9095/2-A	Lab Control Sample	Soluble	Solid	300.0	9095
LCSD 880-9095/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	9095
890-1353-1 MS	BH03	Soluble	Solid	300.0	9095
890-1353-1 MSD	BH03	Soluble	Solid	300.0	9095

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1353-1
SDG: 31403236.020.0129

Client Sample ID: BH03
Date Collected: 10/04/21 09:13
Date Received: 10/04/21 13:57

Lab Sample ID: 890-1353-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			9069	10/07/21 14:40	KL	XEN MID
Total/NA	Analysis	8021B		1	9047	10/08/21 06:38	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	9062	10/07/21 12:47	KL	XEN MID
Total/NA	Analysis	8015 NM		1	9044	10/07/21 09:20	AJ	XEN MID
Total/NA	Prep	8015NM Prep			9164	10/09/21 13:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	9176	10/11/21 11:54	AJ	XEN MID
Soluble	Leach	DI Leach			9095	10/08/21 08:10	CH	XEN MID
Soluble	Analysis	300.0		20	9098	10/08/21 09:16	CH	XEN MID

Client Sample ID: BH03A
Date Collected: 10/04/21 09:20
Date Received: 10/04/21 13:57

Lab Sample ID: 890-1353-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			9069	10/07/21 14:40	KL	XEN MID
Total/NA	Analysis	8021B		1	9047	10/08/21 06:58	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	9062	10/07/21 12:47	KL	XEN MID
Total/NA	Analysis	8015 NM		1	9044	10/07/21 09:20	AJ	XEN MID
Total/NA	Prep	8015NM Prep			9164	10/09/21 13:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	9176	10/11/21 18:42	AJ	XEN MID
Soluble	Leach	DI Leach			9095	10/08/21 08:10	CH	XEN MID
Soluble	Analysis	300.0		1	9098	10/08/21 09:33	CH	XEN MID

Client Sample ID: BH02
Date Collected: 10/04/21 09:51
Date Received: 10/04/21 13:57

Lab Sample ID: 890-1353-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			9069	10/07/21 14:40	KL	XEN MID
Total/NA	Analysis	8021B		1	9047	10/08/21 07:19	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	9062	10/07/21 12:47	KL	XEN MID
Total/NA	Analysis	8015 NM		1	9044	10/07/21 09:20	AJ	XEN MID
Total/NA	Prep	8015NM Prep			9164	10/09/21 13:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	9176	10/11/21 19:02	AJ	XEN MID
Soluble	Leach	DI Leach			9095	10/08/21 08:10	CH	XEN MID
Soluble	Analysis	300.0		5	9098	10/08/21 09:38	CH	XEN MID

Client Sample ID: BH02A
Date Collected: 10/04/21 09:54
Date Received: 10/04/21 13:57

Lab Sample ID: 890-1353-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			9069	10/07/21 14:40	KL	XEN MID
Total/NA	Analysis	8021B		1	9047	10/08/21 07:39	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	9062	10/07/21 12:47	KL	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU Remuda Basin 4-24-30

Job ID: 890-1353-1
SDG: 31403236.020.0129

Client Sample ID: BH02A
Date Collected: 10/04/21 09:54
Date Received: 10/04/21 13:57

Lab Sample ID: 890-1353-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	9044	10/07/21 09:20	AJ	XEN MID
Total/NA	Prep	8015NM Prep			9164	10/09/21 13:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	9176	10/11/21 19:23	AJ	XEN MID
Soluble	Leach	DI Leach			9095	10/08/21 08:10	CH	XEN MID
Soluble	Analysis	300.0		5	9098	10/08/21 09:44	CH	XEN MID

Client Sample ID: SS03
Date Collected: 10/04/21 11:31
Date Received: 10/04/21 13:57

Lab Sample ID: 890-1353-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			9069	10/07/21 14:40	KL	XEN MID
Total/NA	Analysis	8021B		1	9047	10/08/21 07:59	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	9062	10/07/21 12:47	KL	XEN MID
Total/NA	Analysis	8015 NM		1	9044	10/07/21 09:20	AJ	XEN MID
Total/NA	Prep	8015NM Prep			9164	10/09/21 13:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	9176	10/11/21 19:43	AJ	XEN MID
Soluble	Leach	DI Leach			9095	10/08/21 08:10	CH	XEN MID
Soluble	Analysis	300.0		1	9098	10/08/21 09:50	CH	XEN MID

Client Sample ID: SS04
Date Collected: 10/04/21 11:39
Date Received: 10/04/21 13:57

Lab Sample ID: 890-1353-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			9069	10/07/21 14:40	KL	XEN MID
Total/NA	Analysis	8021B		1	9047	10/08/21 08:20	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	9062	10/07/21 12:47	KL	XEN MID
Total/NA	Analysis	8015 NM		1	9044	10/07/21 09:20	AJ	XEN MID
Total/NA	Prep	8015NM Prep			9164	10/09/21 13:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	9176	10/11/21 14:25	AJ	XEN MID
Soluble	Leach	DI Leach			9095	10/08/21 08:10	CH	XEN MID
Soluble	Analysis	300.0		1	9098	10/08/21 10:07	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: 890-1353-1
Project/Site: PLU Remuda Basin 4-24-30 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: 890-1353-1
Project/Site: PLU Remuda Basin 4-24-30 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 Remuda Basin 4-24-30

Job ID: 890-1353-1
SDG: 31403236.020.0129

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1353-1	BH03	Solid	10/04/21 09:13	10/04/21 13:57	1.0
890-1353-2	BH03A	Solid	10/04/21 09:20	10/04/21 13:57	4.0
890-1353-3	BH02	Solid	10/04/21 09:51	10/04/21 13:57	3.0
890-1353-4	BH02A	Solid	10/04/21 09:54	10/04/21 13:57	4.0
890-1353-5	SS03	Solid	10/04/21 11:31	10/04/21 13:57	0.5
890-1353-6	SS04	Solid	10/04/21 11:39	10/04/21 13:57	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 Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849 Email:	Email:	Jeremy.Hill@wsp.com, Dan.Moir@wsp.com

Work Order Comments

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

Project Name:	PLU Remuda Basin 4-24-30	Turn Around	
Project Number:	31403236.020.0102	Routine	☑
P.O. Number:	NAPP2120034052	Rush:	
Sampler's Name:	Jeremy Hill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	4.4 / 4.2	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

890-1353 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
BH03	S	10-4-21	0913	1.0	1	X	X	X
BH03A			0920	4.0				
BH02			0951	3.0				
BH02A			0954	4.0				
SS03			1131	0.5				
SS04			1139	0.5				

Work Order Notes

API
30-015-40660
CC
212487100

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

Sample Comments

Discrete

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		10-4-21 1355	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

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Received by OCD: 10/13/2021 2:52:32 PM

Released to Imaging: 3/9/2022 4:46:07 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: 890-444 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 #: 890-1353-1
Address: 1211 W Florida Ave,	Due Date Requested: 10/8/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: PLU Remuda Bar 4-24-30	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:										
BH03 (890-1353-1)	10/4/21	09 13 Mountain		Solid			X	X	X	X	X	1	
BH03A (890-1353-2)	10/4/21	09 20 Mountain		Solid			X	X	X	X	X	1	
BH02 (890-1353-3)	10/4/21	09 51 Mountain		Solid			X	X	X	X	X	1	
BH02A (890-1353-4)	10/4/21	09 54 Mountain		Solid			X	X	X	X	X	1	
SS03 (890-1353-5)	10/4/21	11 31 Mountain		Solid			X	X	X	X	X	1	
SS04 (890-1353-6)	10/4/21	11 39 Mountain		Solid			X	X	X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by: Cloe Clifton 10.4.21	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

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Released to Imaging: 3/9/2022 4:46:07 PM

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1353-1
SDG Number: 31403236.020.0129

Login Number: 1353
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: 890-1353-1
SDG Number: 31403236.020.0129

Login Number: 1353
List Number: 2
Creator: Lowe, Katie

List Source: Eurofins Xenco, Midland
List Creation: 10/05/21 02:03 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").	True	

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 55790

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 55790
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved. Going forward, please submit with Closure Report photos of intact liner.	3/9/2022