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	NAPP2132241976
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

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

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

Unit Letter	Section	Township	Range	County

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

Nature and Volume of Release

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2132241976
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

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

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

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

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

Printed Name: _____ Title: _____

Signature: Adrian Bates Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Location:	**PLU 30 BD Fed 126H**	
Spill Date:	**11/13/2021**	
Area 1		
Approximate Area =	64.00	sq. ft.
Average Saturation (or depth) of spill =	1.50	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Frac Fluid =	5.04	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**0.00**	**bbls**
Total Frac Fluid=	**5.04**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.00**	**bbls**
Total Frac Fluid =	**5.00**	**bbls**

Incident ID	NAPP2132241976
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	NAPP2132241976
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: _____ _____ Date: _____02/11/2022_____

Email: _____adrian.baker@exxonmobil.com_____ Telephone: _____(432)-236-3808_____

OCD Only

Received by: _____ Date: _____

Incident ID	NAPP2132241976
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature: Adrian Baker Date: 02/11/2022

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: Jennifer Nobui Date: 03/21/2022

Printed Name: Jennifer Nobui Title: Environmental Specialist A

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

March 17, 2022

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

RE: Closure Request
Poker Lake Unit 30 Brushy Draw Fed 126H
Incident Number nAPP2132241976
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 delineation soil sampling activities at the Poker Lake Unit 30 Brushy Draw Fed 126H (Site) in Unit O, Section 30, Township 25 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and delineation activities was to assess for the presence or absence of impacts to soil following a release of frac fluid at the Site. Based on the site assessment activities and laboratory analytical results from the soil sampling events, XTO is submitting this Closure Request, and requesting no further action (NFA) for Incident Number nAPP2132241976.

Please note, this Closure Request is a resubmittal of the February 8, 2022, report with additional information regarding composition of the released frac fluid.

RELEASE BACKGROUND

On November 13, 2021, during frac operations, a low-pressure hose developed a leak. Approximately 5.04 barrels (bbls) of frac fluid were released onto the surface of the well pad. A vacuum truck was dispatched immediately and approximately 5.0 bbls of released fluid were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on November 18, 2021. The release was assigned Incident Number nAPP2132241976.

The frac fluid composition is produced water. Produced water is recycled through filtering and separation, then mixed in a blender with friction reducer and used as frac fluid during the well completion process. The safety data sheet (SDS) for friction reducer is provided as an attachment.

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. On February 4, 2020, WSP installed a soil boring (C-4394) utilizing a sonic drill rig approximately 1.28 miles north of the Site. Soil boring C-4394 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 borehole lithologic/soil sampling 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 at the borehole location is greater than 110 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. The location of borehole C-4394 is provided on Figure 1.

In addition, USGS well 320628103533001 located 1.75 miles northeast of the Site has a reported depth to water of 265 feet bgs, NMOSE well C 03782 located 1.48 miles east of the Site has a reported depth to water of 277 feet bgs, and NMOSE well C 01360 located 2.10 miles south of the Site has a reported depth to water of 173 feet bgs. The location of USGS well 320628103533001 and NMOSE wells C 03782 and C 01360 are provided on Figure 1 and the Well Records are included in Attachment 1. Although the data points listed above are greater than NMOCD's preferred 0.5-mile radius from the Site, the consistent presence of non-water bearing lithology observed in the borehole located north of the Site, and with water well data to the east and south of the Site indicating a depth to water greater than 170 feet bgs, WSP proposes the number of distribution of data points is sufficient to estimate depth to groundwater at the Site as greater than 100 feet bgs.

The closest continuously flowing or significant watercourse to the Site is an intermittent riverine located approximately 612 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 December 23, 2021, WSP personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Two preliminary assessment samples (SS01 and SS02) were collected from within the release extent from a depth of approximately 0.5 feet bgs to assess for the presence or absence of soil impacts at the ground surface. The preliminary soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

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

Laboratory analytical results for preliminary soil samples SS01 and SS02 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. To further confirm the absence of impacted soil, additional lateral and vertical assessment activities were scheduled.

DELINEATION SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

During January 2022, WSP personnel returned to the Site to oversee additional vertical and lateral assessment activities to confirm the absence of impacted soil. One pothole (PH01) was advanced using a track-mounted backhoe to a depth of 4 feet bgs within the release extent. Delineation soil samples PH01, PH01A, and PH01B were collected at depths of 1-foot, 2 feet and 4 feet bgs, respectively. Soil from the pothole was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated PID and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations from the pothole were documented on a lithologic/soil sampling log, which is included in Attachment 2. Additionally, surface assessment samples SS03 though SS06 were collected from a depth of 0.5 feet bgs around the release extent

to confirm the lateral extent of the release. The delineation pothole and surface soil samples were collected, handled, and analyzed as described above at Eurofins in Carlsbad, New Mexico. The pothole and delineation soil sample locations are presented on Figure 3. Photographic documentation was conducted during the site visits. Photographic documentation is included in Attachment 3.

Laboratory analytical results for pothole soil samples PH01, PH01A, and PH01B and surface soil samples SS03 through SS06 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and provided lateral and vertical delineation to below the most stringent Table 1 Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as 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 November 13, 2021 frac fluid release. 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. Additionally, the release was laterally and vertically delineated to below the most stringent Table 1 Closure Criteria.

Based on the soil sample analytical results, no impacted soil was identified and no further remediation was required. As such, XTO respectfully requests no further action for Incident Number nAPP2132241976.

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

Sincerely,

WSP USA Inc.

Nihaar Katoch
Assistant Consultant, Geologist

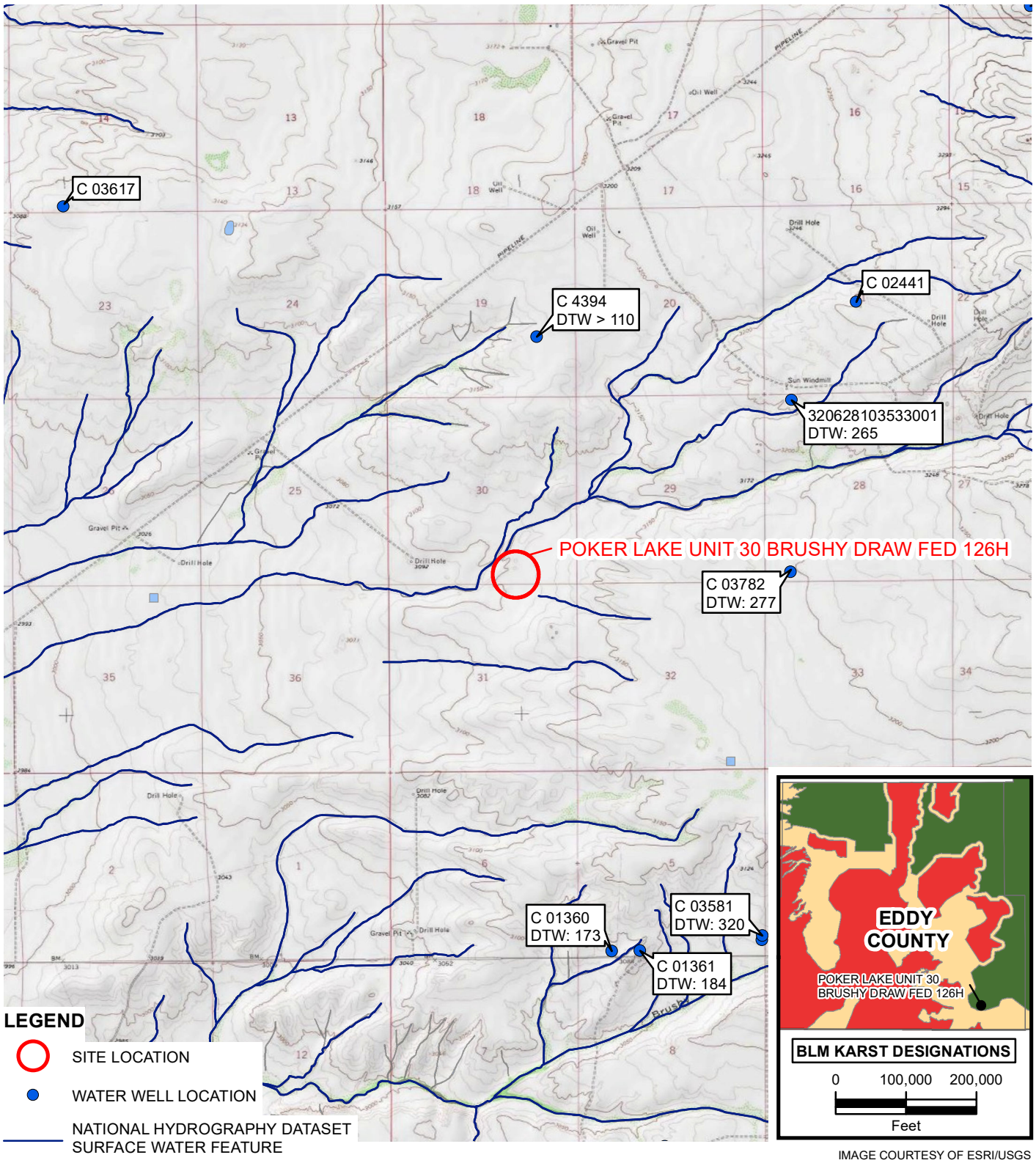
Aimee Cole
Senior Consultant, Environmental Scientist

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

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Referenced Well Records
Attachment 2	Lithologic/Sampling Logs
Attachment 3	Photographic Log
Attachment 4	Laboratory Analytical Reports
Attachment 5	SDS for Friction Reducer

FIGURES



DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT
TD: TOTAL DEPTH IN FEET
NOTE: INCIDENT NUMBER nAPP2132241976

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT 30 BRUSHY DRAW FED 126H
UNIT O SEC 30 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC

P:\XTO Energy\GIS\31403236.029.04_PLU 30 BD FED 126H\MXD\31403236.029.04_FIG01_SL_RECEPTOR_2021.mxd

IMAGE COURTESY OF ESRI

LEGEND

PRELIMINARY SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

RELEASE EXTENT

0 50 100

Feet

N

NOTE: INCIDENT NUMBER nAPP2132241976
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 30 BRUSHY DRAW FED 126H
UNIT O SEC 30 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

wsp

P:\XTO Energy\GIS\31403236.029.04_PLU 30 BD FED 126H\MXD\31403236.029.04_FIG02_PRELIMINARY_2022.mxd

IMAGE COURTESY OF ESRI

LEGEND

DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

RELEASE EXTENT

0 50 100

Feet

N

NOTE: INCIDENT NUMBER nAPP2132241976
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 30 BRUSHY DRAW FED 126H
UNIT O SEC 30 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

wsp

P:\XTO Energy\GIS\31403236.029.04_PLU 30 BD FED 126H\MXD\31403236.029.04_FIG03_DELINEATION_2022.mxd

TABLES

Table 1

Soil Analytical Results
Poker Lake Unit 30 Brushy Draw Fed 126H
Incident Number: nAPP2132241976
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
Preliminary Soil Samples										
SS01	12/23/2021	0.5	<0.00200	<0.00399	57.0	<50.0	<49.9	57.0	57.0	2,870
SS02	12/23/2021	0.5	<0.00199	<0.00398	98.7	<50.0	<50.0	98.7	98.7	3,040
Delineation Soil Samples										
SS03	1/31/2022	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	63.1
SS04	1/31/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	50.0
SS05	1/31/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	53.2
SS06	1/31/2022	0.5	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	43.1
PH01	01/24/2022	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	4,090
PH01A	01/24/2022	2	<0.00199	<0.00398	102	<49.9	<49.9	102	102	608
PH01B	01/24/2022	4	<0.0400	<0.0800	79.7	<50.0	<50.0	79.7	79.7	17.6

Notes:

ft - feet/foot
mg/kg - milligrams per kilograms
BTEX - benzene, toluene, ethylbenzene, and total xylenes
TPH - total petroleum hydrocarbons
DRO - diesel range organics
GRO - gasoline range organics
ORO - oil range organics
NMOCD - New Mexico Oil Conservation Division
NMAC - New Mexico Administrative Code
< - indicates result is less than the stated laboratory method practical quantitation limit
NE - Not Established

ATTACHMENT 1: REFERENCED WELL RECORDS

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: MW01 (C-04394)	Date: 2/4/2020
Project Name: ~~ADU 816~~ PLU 423	RP Number: 2RP-3790
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS / Method: SONIC
Lat/Long:	Field Screening: ~~CHLORIDES, PID~~ / Hole Diameter: 4"/6" / Total Depth: 110'

Comments: No sampling, lithology remarks only

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					1			hydrovac excavated (refusal @ 1')
					2			2.5' SAND, dry, well graded, coarse-fine grand, light brwn-tan, no stain, no odor
D			N		3		SW-S	
					4			5' few silty sand pockets, reddish brwn, no plas, non cohesive
D			N		5			
					6			
					7		SP	6' SAND, dry, poorly graded, light brwn-brwn, fine-very fine 2.5-4 9-12
D			N		8			
					9			7.5' some mod consol ss
D			N		10		SW-S	light brwn-brwn, sub rounded
					11			10' abundant ss 10-11' color change
					12			12' ss gravel? absent tan-off white
					13		SP	16' abundant ss gravel 13' back t/ light brwn-brwn
					14			(mod consol)
					15			19' abundant - some
D			N		16			21.5' sandstone, light, abundant well
					17		SW-S	brwn-tan, dry, mod consolidated
D			N		18			23' sandstone chunks absent
D			N		19			
					20			
					21			
D			N		22			
					23			
					24			
D			N		25			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: MW01 (C-04394)	Date: 2/4/2020	
Project Name: ~~ADU 816~~ PLU 423	RP Number: ~~2RP-2674~~ 2RP-3790	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS	Method: SONIC
Lat/Long:	Field Screening: ~~CHLORIDES, PID~~	Hole Diameter: 4"/6"
		Total Depth: 110'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					26			27.5' SAND, dry, light brwn - tan, poorly graded, fine-very fine
D			N		27			
					28		SP	30' trace light ~~brwn - tan~~ grey - grey caliche pebbles (gravel), rounded
D			N		29			
					30			31' caliche pebbles absent
D			N		31			
					32			31.5' color change light brwn - reddish brwn
M			N		33			33-34' abundant ss chunks, mod consol
					34			
					35			35' ss chunks absent
M			N		36			
					37		SW-S	36' some clay pockets, reddish brwn, few pebbles, rounded - subrounded, grey - light grey, few laminations w/ clay, caliche, dolomite?
M			N		38			
					39			
					40			
M			N		41			42.5' clay laminations, trace, reddish brwn
					42			
M			N		43			44' color change, light brwn - tan, SILTY sand
					44			
M			N		45		SP-SM	44.5' some SILTY sand, predomin light brwn - tan, no plasticity, non cohesive, trace high plas clay nodules, reddish brwn
					46			
D			N		47			48.5' low plas clay band, orange (35-40 mm)
					48			
					49			49.5' faint yellow band, (15-20 mm)
D			N		50			

rig adding water

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: (C-04394)	Date:
MW01	2/4/2020
Project Name:	**RP Number:**
PLU 423	ZRP-3790

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
FS	sonic

Lat/Long:	Field Screening: ~~CHLORIDES, PID~~	Hole Diameter:	Total Depth:
		4" / 6"	110'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					51		SP	51.5' trace, high plas clay nodules
D			N		52			
					53			53-54' some silty ss, poorly consolidated
D			N		54			
					55			55.5' color change tan-grey band (30mm)
M			N		56			
					57	X		59.5' SILTY sand, light brwn-brwn, moist, no plas, non cohesive, no stain
M			N		58			
					59			
M			N		60		SM	62' more consolidated
					61			
					62			64' dark brwn color change, silty clay nodules
D			N		63		SM-S	
					64			66' pockets of silty clay brwn-green
M			N		65			
					66			68' low plas clay pockets some, few low plas clay laminations
M			N		67			
					68			71' SILTY sand, dry, no plas, non cohesive, light brwn-tan
M			N		69			
					70			74' trace caliche pebbles, light grey-grey
D			N		71		SM	
					72			
					73			
					74			
D			N		75			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: MW01 (C-04394)	Date: 2/4/2020
Project Name: PLU 423	RP Number: 2RP-3790
Logged By: FS, BB	Method: sonic
Hole Diameter: 6"/4"	Total Depth: 110'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: ~~CHLORIDES, PID~~

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
						76	SM	76.5' trace low plas clay nodules, reddish brwn
D			N			77		
						78		82' CLAYSTONE, moist, brwn-greenish grey, low plasticity, cohesive, no stain, no odor mod consolidated
D			N			79		
						80		
D			N			81		85' SILTY sand, dry, light brwn - brwn, no plas, non cohesive, no stain, no odor
						82	CL-S	
M			N			83		
						84		
						85	SM	87' color change tan - off white
D			N			86		88' light brwn - brwn
						87	SM-S	
D			N			88		87' SILTSTONE, dry, w/ clay pockets, low plas
						89		
D			N			90		
						91		91' abundant clay pockets
						92		94.5' band yellow low plas clay
D			N			93		
						94	SM	
D			N			95	CH	end@95' 2/4/2020
						96		2/5/20
M			N			97		95'-101 CLAY, moist, brown - dark brown, high plasticity, cohesive, some tan clay laminations, no stain, no odor.
M			N			98		
D			N			99		98'-99' tan fine grain sandstone stringer.
M			N			100		

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: (C-04394) MW01	Date: 2/5/2020	
Project Name: PLU 423	RP Number: 2RP-3790	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: BP	Method: Sonic
Lat/Long:	Field Screening: CHLORIDES, PID.	Hole Diameter: 6"/4"
		Total Depth: 110'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D			N		101		CH	
D			N		102		SP-S	101'- 105' SANDSTONE, tan - light brown, dry, moderately consolidated, calcareous cemented, poorly graded, no staining, no odor.
D			N		103			
D			N		104			
M			N		105			105'- 110' CLAY, moist, dark brown - brown, high plasticity, cohesive, trace tan sand laminations, no stain, no odor.
D			N		106		CH	
D			N		107			
M			N		108			107'- 109' tan - light brown well consolidated fine grain sandstone stringer.
					109			
					110			
					111		TD@110	TD @ 110'
					112			
					113			
					114			
					115			
					116			
					117			
					118			
					119			
					120			
					121			
					122			
					123			
					124			
					125			

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER): POD-1 Renumbered C-3832-POD 2	OSE FILE NUMBER(S): C 3782 (Exploratory) Renumbered C-3832
WELL OWNER NAME(S): BOPCO, L.P.	PHONE (OPTIONAL): (817) 390-8662
WELL OWNER MAILING ADDRESS: 201 N Main St Suite 2900	CITY: Fort Worth STATE: TX ZIP: 76102

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	05	40.1	N
LONGITUDE	103	53	32.2	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

SW1/4SE1/4SW1/4SW1/4 of Section 28, Township 25 South, Range 30 East, in the NE corner of a well pad.

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
331	Joel H. Stewart	SBQ Drilling, LLC

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
01-16-15	01-17-15	805	±805	

COMPLETED WELL IS: (•) ARTESIAN ( ) DRY HOLE ( ) SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 277

DRILLING FLUID: ( ) AIR (•) MUD ADDITIVES – SPECIFY:

DRILLING METHOD: (•) ROTARY ( ) HAMMER ( ) CABLE TOOL ( ) OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	270	14.75	ASTM A53B	Welded	8.625	0.322	
270	805	14.75	304 Stainless Steel	Welded	8.625	0.25	16
0	15	19	ASTM A53B	---	16	0.25	

STATE ENGINEER OFFICE RECEIVED 2015 FEB 16 PM 2:35

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	120	14.75	Sand Mix Ready Mix	90.36	grav. tremie meas.
120	170	14.75	Hydrated Bentonite Chips	35.90	grav. tremie meas.
170	805	14.75	6/9 Silica Sand	455.95	Tremie Pipe

FOR OSE INTERNAL USE Renumbered from C-3782-POD1 WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER C-3832	POD NUMBER POD 2	TRN NUMBER 555125
LOCATION 25.30.28.3343		PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	30	30	Cemented Sand, light tan, sub-angular	○ Y ○ N	
30	40	10	Sandy Silt, light brown, sub-angular	○ Y ○ N	
40	60	20	Sandy clay, reddish brown	○ Y ○ N	
60	80	20	Silty Sand, light brown, sub-angular	○ Y ○ N	
80	250	170	Fine to Medium Sand, light tan, sub-angular to rounded	○ Y ○ N	
250	260	10	Clayey Sand, brown, sub-angular	○ Y ○ N	
260	320	60	Fine Sand, light tan, sub-angular	◉ Y ○ N	
320	380	60	Silty Sand, brownish gray, sub-angular	◉ Y ○ N	
380	410	30	Fine Sand, dark gray, sub-angular	◉ Y ○ N	
410	530	120	Clayey Fine Sand, dark gray, sub-angular	◉ Y ○ N	
530	590	60	Sandy Clay, dark gray, sub-angular	◉ Y ○ N	
590	600	10	Clayey Fine Sand, dark gray, sub-angular	◉ Y ○ N	
600	630	30	Sandy Clay, dark gray, sub-angular	◉ Y ○ N	
630	650	20	Clayey Sand, dark gray, sub-angular	◉ Y ○ N	
650	700	50	Sandy Clay, dark gray, sub-angular	◉ Y ○ N	
700	710	10	Clayey Sand, brown and gray, sub-angular	◉ Y ○ N	
710	760	50	Sandy Clay, dark gray, sub-angular	◉ Y ○ N	
760	770	10	Clay, 75% gray, 25% red	◉ Y ○ N	
770	780	10	Clay, 50% gray, 50% red	◉ Y ○ N	
780	790	10	Clay, 25% gray, 75% red	◉ Y ○ N	
790	805	15	Sandy Clay, Grayish red, 10% white sand.	◉ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ○ PUMP ○ AIR LIFT ○ BAILER ◉ OTHER – SPECIFY: TBD by pump test

TOTAL ESTIMATED WELL YIELD (gpm): TBD

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

Pump test will be performed at a later time.
Hydrated Bentonite Chips and Sand Mix Ready Mix were placed by gravity and tagged with tremie pipe.

STATE ENGINEER OFFICE ROSWELL, NEW MEXICO 2015 FEB 19 PM 2 35

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Silverio Galindo, Gabriel Armijo, Pedro Pizano

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Joel H. Stewart — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

2-13-15 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER C-3632	POD NUMBER POD 2	TRN NUMBER 555125
LOCATION 25.30.28.3343		PAGE 2 OF 2

New Mexico Office of the State Engineer
Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 01360	4	3	3	05	26S	30E	602997	3548152

Driller License: 95 **Driller Company:** FOLK DRILLING CO.

Driller Name:

Drill Start Date: 04/26/1952 **Drill Finish Date:** 05/15/1952 **Plug Date:**

Log File Date: 11/17/1953 **PCW Rcv Date:** **Source:** Shallow

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

Casing Size: 12.75 **Depth Well:** 770 feet **Depth Water:** 173 feet

Water Bearing Stratifications:	Top	Bottom	Description
	210	220	Sandstone/Gravel/Conglomerate
	580	585	Sandstone/Gravel/Conglomerate
	665	710	Sandstone/Gravel/Conglomerate
	725	770	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	180	289
	538	770

Meter Number: 16557 **Meter Make:** SIEMENS

Meter Serial Number: L1254823 **Meter Multiplier:** 100.0000

Number of Dials: 8 **Meter Type:** Diversion

Unit of Measure: Gallons **Return Flow Percent:**

Usage Multiplier: **Reading Frequency:** Quarterly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
07/01/2014	2014	234997	A	RPT		0	
09/30/2014	2014	354169	A	RPT		36.573	
11/20/2014	2014	7281000	A	RPT		0	
12/31/2014	2014	11430100	A	RPT		12.733	
04/01/2015	2015	22535200	A	RPT		34.080	
07/01/2015	2015	35821800	A	RPT		40.775	
10/05/2015	2015	46631200	A	RPT		33.173	
12/31/2015	2015	55653200	A	RPT		27.688	
01/31/2016	2016	58047600	A	RPT		7.348	
02/29/2016	2016	61081100	A	RPT		9.309	
03/31/2016	2016	62593100	A	RPT		4.640	
06/30/2016	2016	71642600	A	RPT		27.772	
10/03/2016	2016	81998399	A	RPT		31.781	
12/31/2016	2016	90558600	A	RPT		26.270	
04/04/2019	2019	164290087	A	RPT		226.274	
10/02/2019	2019	790380	A	RPT	METER CHANGE OUT	0	

07/2019

01/02/2020	2020	1733720	A	RPT	289.500	
04/07/2021	2021	36814117	A	WEB	10765.779	X
07/27/2021	2021	36836238	A	WEB	6.789	X
10/04/2021	2021	36844496	A	WEB	2.534	X
12/31/2021	2021	36847463	A	WEB	0.911	X

**YTD Meter Amounts:	Year	Amount
	2014	49.306
	2015	135.716
	2016	107.120
	2019	226.274
	2020	289.500
	2021	10776.013

Meter Number:	16558	**Meter Make:**	MASTERMETER
Meter Serial Number:	32530403	**Meter Multiplier:**	100.0000
Number of Dials:	6	**Meter Type:**	Diversion
Unit of Measure:	Gallons	**Return Flow Percent:**	
Usage Multiplier:		**Reading Frequency:**	

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
10/01/2014	2014	354169	A	RPT		0	
11/20/2014	2014	415555	A	RPT		18.839	
11/21/2014	2014	72810	A	RPT		0	
12/31/2014	2014	112178	A	RPT		12.082	
02/01/2015	2015	147039	A	RPT		10.698	
03/02/2015	2015	188133	A	RPT		12.611	
04/01/2015	2015	224102	A	RPT		11.038	
04/30/2015	2015	270723	A	RPT		14.307	
05/31/2015	2015	315628	A	tw		13.781	
07/01/2015	2015	369075	A	tw		16.402	
08/01/2015	2015	395528	A	tw		8.118	
08/31/2015	2015	455361	A	tw		18.362	
10/01/2015	2015	466312	A	RPT		3.361	

**YTD Meter Amounts:	Year	Amount
	2014	30.921
	2015	108.678

National Water Information System: Web Interface

USGS Water Resources (Cooperator Access) Data Category: Groundwater Geographic Area: United States GO

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

site_no list =

- 320628103533001

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

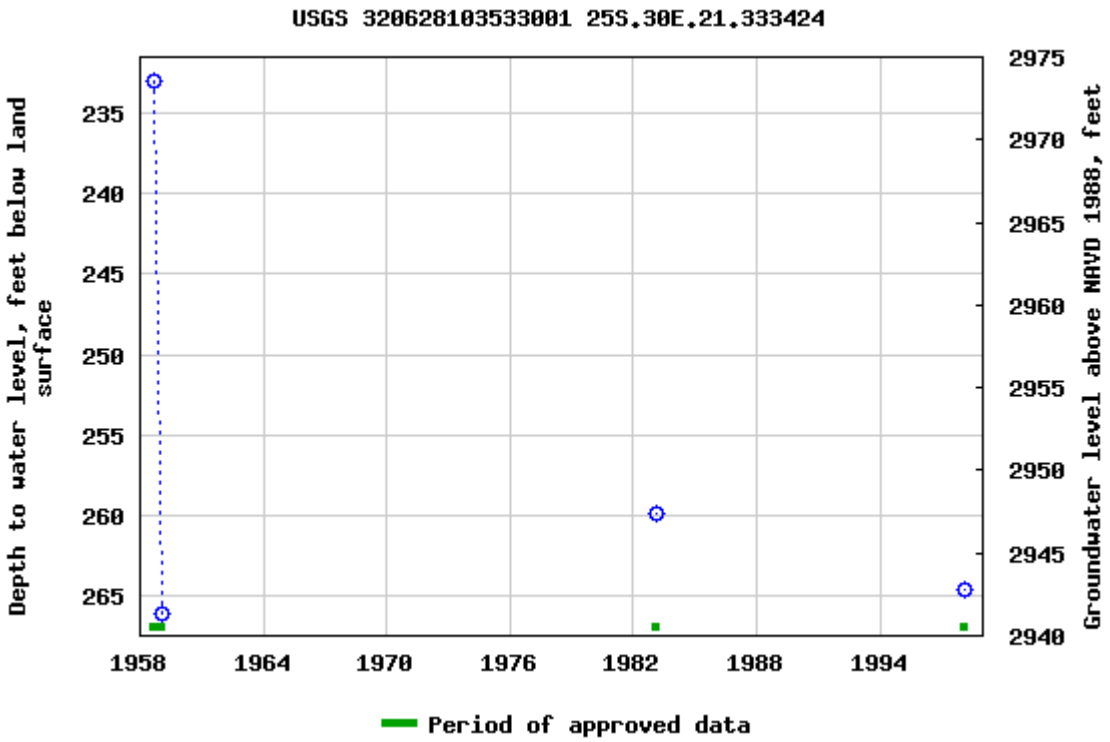
USGS 320628103533001 25S.30E.21.333424

Available data for this site Groundwater: Field measurements GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°06'28", Longitude 103°53'30" NAD27
Land-surface elevation 3,207 feet above NAVD88
The depth of the well is 288 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2022-02-03 13:07:48 EST
0.69 0.61 nadww02

ATTACHMENT 2: LITHOLOGIC/SAMPLING LOGS

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: PH01	Date: 1/24/2022
Site Name: PLU 30 BD Fed 126H	
RP or Incident Number: nAPP2132241976	
WSP Job Number: 31403236.029	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: PB	Method: Backhoe		
Lat/Long: 32.094514, -103.917365	Field Screening: TPH ,Chlorides	Hole Diameter: N/A	Total Depth: 4 feet bgs

Comments: All chloride field screenings include a 40% correction factor
M-moist; D-dry; Y-yes; N-no

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	CCHE	0-1', CALICHE, dry, tan-light brown, unconsolidated, no stain, no odor, fill.
D	3,976	0.9	N	PH01	1	1	SP	1'-4', SAND, dry, brown, abundant silt, caliche gravel, coarse to medium grain, poorly sorted, moderately graded, no stain, no odor.
D	589.0	2.0	N	PH01A	2	2		
D	<124	2.4	N		3	3		
D	<124	1.9	N	PH01B	4	4		

TD @ 4 feet bgs

ATTACHMENT 3: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG		
XTO Energy, Inc.	POKER LAKE UNIT 30 BRUSHY DRAW FED 126H EDDY COUNTY, NEW MEXICO	NAPP2132241976

Photo No.	Date
1	December 23, 2021

View of release area during initial site assessment.

Photo No.	Date
2	December 23, 2021

View of release area during initial site assessment.

PHOTOGRAPHIC LOG		
XTO Energy, Inc.	POKER LAKE UNIT 30 BRUSHY DRAW FED 126H EDDY COUNTY, NEW MEXICO	NAPP2132241976

Photo No.	Date
3	January 24, 2022

View facing southeast of delineation activities.

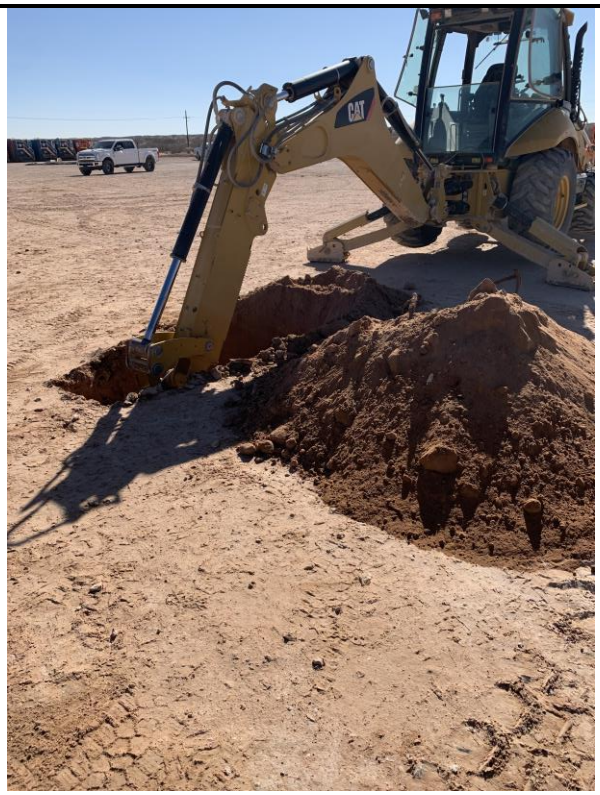
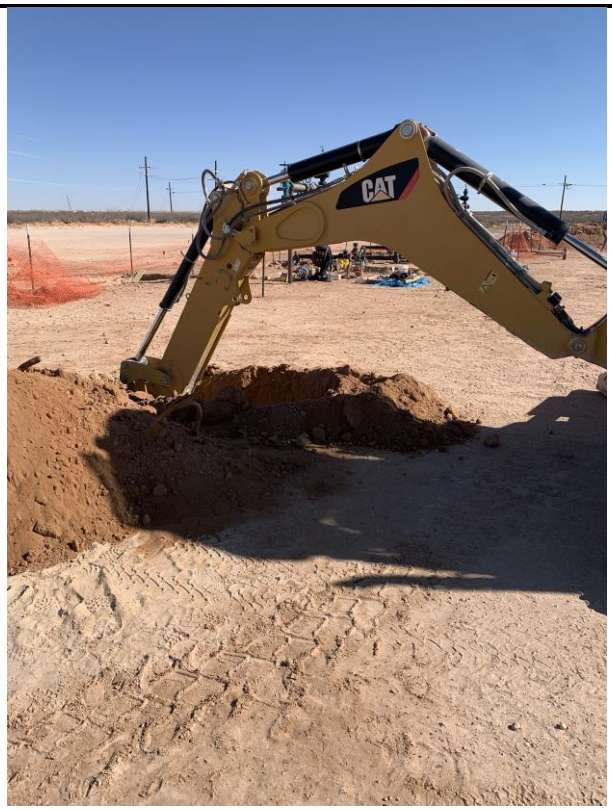


Photo No.	Date
4	January 24, 2022

View facing northeast of delineation activities.



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: 890-1757-1
Laboratory Sample Delivery Group: 31403236.029
Client Project/Site: PLU 30 BD Fed 126H Task04.02

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

Attn: Benjamin Belill

JKramer

Authorized for release by:
12/30/2021 10:27:45 AM

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

Client: WSP USA Inc.
Project/Site: PLU 30 BD Fed 126H Task04.02

Laboratory Job ID: 890-1757-1
SDG: 31403236.029

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QC Sample Results 8
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Method Summary 16
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Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1757-1
Project/Site: PLU 30 BD Fed 126H Task04.02 SDG: 31403236.029

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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: 890-1757-1
Project/Site: PLU 30 BD Fed 126H Task04.02 SDG: 31403236.029

Job ID: 890-1757-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1757-1

Receipt
The samples were received on 12/27/2021 11:54 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: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-15651 and analytical batch 880-15623 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-15659 and analytical batch 880-15677 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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 30 BD Fed 126H Task04.02

Job ID: 890-1757-1
SDG: 31403236.029

Client Sample ID: SS01

Date Collected: 12/23/21 11:25
Date Received: 12/27/21 11:54
Sample Depth: 0.5

Lab Sample ID: 890-1757-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U F1	0.00200		mg/Kg		12/28/21 13:02	12/29/21 01:01	1
Toluene	<0.00200	U F1	0.00200		mg/Kg		12/28/21 13:02	12/29/21 01:01	1
Ethylbenzene	<0.00200	U F1	0.00200		mg/Kg		12/28/21 13:02	12/29/21 01:01	1
m-Xylene & p-Xylene	<0.00399	U F1	0.00399		mg/Kg		12/28/21 13:02	12/29/21 01:01	1
o-Xylene	<0.00200	U F1	0.00200		mg/Kg		12/28/21 13:02	12/29/21 01:01	1
Xylenes, Total	<0.00399	U F1	0.00399		mg/Kg		12/28/21 13:02	12/29/21 01:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*12/28/21 13:02*	*12/29/21 01:01*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*12/28/21 13:02*	*12/29/21 01:01*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			12/30/21 10:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**57.0**		50.0		mg/Kg			12/30/21 10:33	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/28/21 13:53	12/29/21 14:00	1
Diesel Range Organics (Over C10-C28)	**57.0**	***+**	50.0		mg/Kg		12/28/21 13:53	12/29/21 14:00	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/28/21 13:53	12/29/21 14:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*12/28/21 13:53*	*12/29/21 14:00*	*1*
o-Terphenyl	*110*		*70 - 130*	*12/28/21 13:53*	*12/29/21 14:00*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2870**		24.9		mg/Kg			12/28/21 18:07	5

Client Sample ID: SS02

Date Collected: 12/23/21 11:30
Date Received: 12/27/21 11:54
Sample Depth: 0.5

Lab Sample ID: 890-1757-2

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		12/28/21 13:02	12/29/21 01:22	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/28/21 13:02	12/29/21 01:22	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/28/21 13:02	12/29/21 01:22	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/28/21 13:02	12/29/21 01:22	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/28/21 13:02	12/29/21 01:22	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/28/21 13:02	12/29/21 01:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*12/28/21 13:02*	*12/29/21 01:22*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 30 BD Fed 126H Task04.02

Job ID: 890-1757-1
SDG: 31403236.029

Client Sample ID: SS02
Date Collected: 12/23/21 11:30
Date Received: 12/27/21 11:54
Sample Depth: 0.5

Lab Sample ID: 890-1757-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*12/28/21 13:02*	*12/29/21 01:22*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/30/21 10:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**98.7**		50.0		mg/Kg			12/30/21 10:33	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/28/21 13:53	12/29/21 14:21	1
Diesel Range Organics (Over C10-C28)	**98.7**	***+**	50.0		mg/Kg		12/28/21 13:53	12/29/21 14:21	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/28/21 13:53	12/29/21 14:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*12/28/21 13:53*	*12/29/21 14:21*	*1*
o-Terphenyl	*106*		*70 - 130*	*12/28/21 13:53*	*12/29/21 14:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3040**		24.8		mg/Kg			12/28/21 18:17	5

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 30 BD Fed 126H Task04.02

Job ID: 890-1757-1
SDG: 31403236.029

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1757-1	SS01	115	112
890-1757-1 MS	SS01	116	81
890-1757-1 MSD	SS01	108	98
890-1757-2	SS02	112	107
LCS 880-15651/1-A	Lab Control Sample	101	107
LCSD 880-15651/2-A	Lab Control Sample Dup	103	95
MB 880-15624/5-A	Method Blank	116	113
MB 880-15651/5-A	Method Blank	108	108

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)
890-1751-A-1-B MS	Matrix Spike	110	93
890-1751-A-1-C MSD	Matrix Spike Duplicate	110	93
890-1757-1	SS01	108	110
890-1757-2	SS02	104	106

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO2	OTPH2
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
LCS 880-15659/2-A	Lab Control Sample	100	96
LCSD 880-15659/3-A	Lab Control Sample Dup	121	123
MB 880-15659/1-A	Method Blank	102	105

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 30 BD Fed 126H Task04.02

Job ID: 890-1757-1
SDG: 31403236.029

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-15624/5-A
Matrix: Solid
Analysis Batch: 15623

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 15624

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/28/21 10:04	12/28/21 13:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/28/21 10:04	12/28/21 13:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/28/21 10:04	12/28/21 13:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/28/21 10:04	12/28/21 13:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/28/21 10:04	12/28/21 13:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/28/21 10:04	12/28/21 13:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*12/28/21 10:04*	*12/28/21 13:45*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*12/28/21 10:04*	*12/28/21 13:45*	*1*

Lab Sample ID: MB 880-15651/5-A
Matrix: Solid
Analysis Batch: 15623

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 15651

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/28/21 13:02	12/29/21 00:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/28/21 13:02	12/29/21 00:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/28/21 13:02	12/29/21 00:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/28/21 13:02	12/29/21 00:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/28/21 13:02	12/29/21 00:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/28/21 13:02	12/29/21 00:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*12/28/21 13:02*	*12/29/21 00:39*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*12/28/21 13:02*	*12/29/21 00:39*	*1*

Lab Sample ID: LCS 880-15651/1-A
Matrix: Solid
Analysis Batch: 15623

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 15651

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08352		mg/Kg		84	70 - 130		
Toluene			0.100	0.07913		mg/Kg		79	70 - 130		
Ethylbenzene			0.100	0.07795		mg/Kg		78	70 - 130		
m-Xylene & p-Xylene			0.200	0.1548		mg/Kg		77	70 - 130		
o-Xylene			0.100	0.07982		mg/Kg		80	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-15651/2-A
Matrix: Solid
Analysis Batch: 15623

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 15651

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07468		mg/Kg		75	70 - 130	11	35

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QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 30 BD Fed 126H Task04.02

Job ID: 890-1757-1
SDG: 31403236.029

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

Lab Sample ID: LCSD 880-15651/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 15623 — **Prep Batch: 15651**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.07364		mg/Kg		74	70 - 130	7	35
Ethylbenzene			0.100	0.07284		mg/Kg		73	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.1461		mg/Kg		73	70 - 130	6	35
o-Xylene			0.100	0.07519		mg/Kg		75	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 890-1757-1 MS — **Client Sample ID: SS01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 15623 — **Prep Batch: 15651**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U F1	0.0998	0.05503	F1	mg/Kg		55	70 - 130
Toluene	<0.00200	U F1	0.0998	0.05714	F1	mg/Kg		57	70 - 130
Ethylbenzene	<0.00200	U F1	0.0998	0.05026	F1	mg/Kg		50	70 - 130
m-Xylene & p-Xylene	<0.00399	U F1	0.200	0.1116	F1	mg/Kg		56	70 - 130
o-Xylene	<0.00200	U F1	0.0998	0.05151	F1	mg/Kg		52	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*

Lab Sample ID: 890-1757-1 MSD — **Client Sample ID: SS01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 15623 — **Prep Batch: 15651**

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	0.06147	F1	mg/Kg		61	70 - 130	11	35
Toluene	<0.00200	U F1	0.101	0.05994	F1	mg/Kg		59	70 - 130	5	35
Ethylbenzene	<0.00200	U F1	0.101	0.06056	F1	mg/Kg		60	70 - 130	19	35
m-Xylene & p-Xylene	<0.00399	U F1	0.202	0.1227	F1	mg/Kg		61	70 - 130	9	35
o-Xylene	<0.00200	U F1	0.101	0.06165	F1	mg/Kg		61	70 - 130	18	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

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

Lab Sample ID: MB 880-15659/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 15677 — **Prep Batch: 15659**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/28/21 13:53	12/29/21 10:02	1

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 30 BD Fed 126H Task04.02

Job ID: 890-1757-1
SDG: 31403236.029

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

Lab Sample ID: MB 880-15659/1-A
Matrix: Solid
Analysis Batch: 15677

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 15659

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/28/21 13:53	12/29/21 10:02	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/28/21 13:53	12/29/21 10:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*12/28/21 13:53*	*12/29/21 10:02*	*1*
o-Terphenyl	*105*		*70 - 130*	*12/28/21 13:53*	*12/29/21 10:02*	*1*

Lab Sample ID: LCS 880-15659/2-A
Matrix: Solid
Analysis Batch: 15677

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 15659

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1088		mg/Kg		109	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1110		mg/Kg		111	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*96*		*70 - 130*

Lab Sample ID: LCSD 880-15659/3-A
Matrix: Solid
Analysis Batch: 15677

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 15659

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1188		mg/Kg		119	70 - 130	9	20
Diesel Range Organics (Over C10-C28)			1000	1311	*+	mg/Kg		131	70 - 130	17	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*121*		*70 - 130*
o-Terphenyl	*123*		*70 - 130*

Lab Sample ID: 890-1751-A-1-B MS
Matrix: Solid
Analysis Batch: 15677

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 15659

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	1990	2008		mg/Kg		101	70 - 130		
Diesel Range Organics (Over C10-C28)	64.4	F1 *+	1990	1989		mg/Kg		97	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*110*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 30 BD Fed 126H Task04.02

Job ID: 890-1757-1
SDG: 31403236.029

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

Lab Sample ID: 890-1751-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 15677 — **Prep Batch: 15659**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	2000	2003		mg/Kg		100	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	64.4	F1 *+	2000	1983		mg/Kg		96	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*110*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-15648/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 15652

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			12/28/21 15:59	1

Lab Sample ID: LCS 880-15648/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 15652

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	258.5		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-15648/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 15652

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	258.7		mg/Kg		103	90 - 110	0	20

Lab Sample ID: 880-9629-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 15652

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	54.7		251	305.8		mg/Kg		100	90 - 110		

Lab Sample ID: 880-9629-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 15652

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	54.7		251	294.4		mg/Kg		95	90 - 110	4	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1757-1
Project/Site: PLU 30 BD Fed 126H Task04.02 SDG: 31403236.029

GC VOA

Analysis Batch: 15623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1757-1	SS01	Total/NA	Solid	8021B	15651
890-1757-2	SS02	Total/NA	Solid	8021B	15651
MB 880-15624/5-A	Method Blank	Total/NA	Solid	8021B	15624
MB 880-15651/5-A	Method Blank	Total/NA	Solid	8021B	15651
LCS 880-15651/1-A	Lab Control Sample	Total/NA	Solid	8021B	15651
LCSD 880-15651/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	15651
890-1757-1 MS	SS01	Total/NA	Solid	8021B	15651
890-1757-1 MSD	SS01	Total/NA	Solid	8021B	15651

Prep Batch: 15624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-15624/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 15651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1757-1	SS01	Total/NA	Solid	5035	
890-1757-2	SS02	Total/NA	Solid	5035	
MB 880-15651/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-15651/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-15651/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1757-1 MS	SS01	Total/NA	Solid	5035	
890-1757-1 MSD	SS01	Total/NA	Solid	5035	

Analysis Batch: 15797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1757-1	SS01	Total/NA	Solid	Total BTEX	
890-1757-2	SS02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 15659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1757-1	SS01	Total/NA	Solid	8015NM Prep	
890-1757-2	SS02	Total/NA	Solid	8015NM Prep	
MB 880-15659/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-15659/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-15659/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1751-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1751-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 15677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1757-1	SS01	Total/NA	Solid	8015B NM	15659
890-1757-2	SS02	Total/NA	Solid	8015B NM	15659
MB 880-15659/1-A	Method Blank	Total/NA	Solid	8015B NM	15659
LCS 880-15659/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	15659
LCSD 880-15659/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	15659
890-1751-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	15659
890-1751-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	15659

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1757-1
Project/Site: PLU 30 BD Fed 126H Task04.02 SDG: 31403236.029

GC Semi VOA

Analysis Batch: 15798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1757-1	SS01	Total/NA	Solid	8015 NM	
890-1757-2	SS02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 15648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1757-1	SS01	Soluble	Solid	DI Leach	
890-1757-2	SS02	Soluble	Solid	DI Leach	
MB 880-15648/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-15648/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-15648/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-9629-A-1-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-9629-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 15652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1757-1	SS01	Soluble	Solid	300.0	15648
890-1757-2	SS02	Soluble	Solid	300.0	15648
MB 880-15648/1-A	Method Blank	Soluble	Solid	300.0	15648
LCS 880-15648/2-A	Lab Control Sample	Soluble	Solid	300.0	15648
LCSD 880-15648/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	15648
880-9629-A-1-D MS	Matrix Spike	Soluble	Solid	300.0	15648
880-9629-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	15648

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1757-1
Project/Site: PLU 30 BD Fed 126H Task04.02 SDG: 31403236.029

Client Sample ID: SS01 Lab Sample ID: 890-1757-1

Date Collected: 12/23/21 11:25 **Matrix: Solid**
Date Received: 12/27/21 11:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			15651	12/28/21 13:02	MR	XEN MID
Total/NA	Analysis	8021B		1	15623	12/29/21 01:01	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	15797	12/30/21 10:20	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	15798	12/30/21 10:33	AJ	XEN MID
Total/NA	Prep	8015NM Prep			15659	12/28/21 13:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	15677	12/29/21 14:00	AJ	XEN MID
Soluble	Leach	DI Leach			15648	12/28/21 12:08	CH	XEN MID
Soluble	Analysis	300.0		5	15652	12/28/21 18:07	CH	XEN MID

Client Sample ID: SS02 Lab Sample ID: 890-1757-2

Date Collected: 12/23/21 11:30 **Matrix: Solid**
Date Received: 12/27/21 11:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			15651	12/28/21 13:02	MR	XEN MID
Total/NA	Analysis	8021B		1	15623	12/29/21 01:22	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	15797	12/30/21 10:20	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	15798	12/30/21 10:33	AJ	XEN MID
Total/NA	Prep	8015NM Prep			15659	12/28/21 13:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	15677	12/29/21 14:21	AJ	XEN MID
Soluble	Leach	DI Leach			15648	12/28/21 12:08	CH	XEN MID
Soluble	Analysis	300.0		5	15652	12/28/21 18:17	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-1757-1
Project/Site: PLU 30 BD Fed 126H Task04.02 SDG: 31403236.029

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: 890-1757-1
Project/Site: PLU 30 BD Fed 126H Task04.02 SDG: 31403236.029

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 30 BD Fed 126H Task04.02

Job ID: 890-1757-1
SDG: 31403236.029

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1757-1	SS01	Solid	12/23/21 11:25	12/27/21 11:54	0.5
890-1757-2	SS02	Solid	12/23/21 11:30	12/27/21 11:54	0.5

Chain of Custody

XENCO LABORATORIES

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Benjamin Bellil	Bill to: (if different)	Kyle Litrell
Company Name:	WSP	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:		Email:	Alexis.Castro@wsp.com; Benjamin.Bellil@wsp.com

Work Order Comments

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

Project Name:	PLU 30 BD Fed 126H Task 04.02	Turn Around	
Project Number:	31403236.029	Routine ☐	
P.O. Number:		Rush: 3-Day TAT	
Sampler's Name:	Alexis Castro	Due Date:	

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

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS01	S	12/23/2021	1125	0.5'	1	X	X	X
SS02	S	12/23/2021	1130	0.5'	1	X	X	X

890-1757 Chain of Custody

Work Order Notes

CC: 157609 1001
AFE:
API:
INC: nAPP2132241976

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

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

Revised Date 051418 Rev. 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1757-1
SDG Number: 31403236.029

Login Number: 1757
List Number: 1
Creator: Olivas, Nathaniel

List Source: Eurofins Xenco, Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1757-1
SDG Number: 31403236.029

Login Number: 1757
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Xenco, Midland
List Creation: 12/28/21 10:39 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-1863-1
Laboratory Sample Delivery Group: 31403236.029 Task 04.02
Client Project/Site: PLU 30 BD FED 126H

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

Attn: Benjamin Belill

JKramer

Authorized for release by:
1/28/2022 1:28:25 PM

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

Client: WSP USA Inc.
Project/Site: PLU 30 BD FED 126H

Laboratory Job ID: 890-1863-1
SDG: 31403236.029 Task 04.02

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Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1863-1
Project/Site: PLU 30 BD FED 126H SDG: 31403236.029 Task 04.02

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc. Job ID: 890-1863-1
Project/Site: PLU 30 BD FED 126H SDG: 31403236.029 Task 04.02

Job ID: 890-1863-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-1863-1

Receipt
The samples were received on 1/24/2022 2:04 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C

GC VOA
Method 8021B: The following sample was diluted due to the nature of the sample matrix: PH01B (890-1863-3) at 20.0. Elevated reporting limits (RLs) are provided.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-17749/2-A), (LCSD 880-17749/3-A) and (890-1863-A-1-E MS). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: WSP USA Inc. Job ID: 890-1863-1
Project/Site: PLU 30 BD FED 126H SDG: 31403236.029 Task 04.02

Client Sample ID: PH01 Lab Sample ID: 890-1863-1

Date Collected: 01/24/22 10:00 **Matrix: Solid**
Date Received: 01/24/22 14:04
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/25/22 10:56	01/25/22 22:14	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/25/22 10:56	01/25/22 22:14	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/25/22 10:56	01/25/22 22:14	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/25/22 10:56	01/25/22 22:14	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/25/22 10:56	01/25/22 22:14	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/25/22 10:56	01/25/22 22:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*01/25/22 10:56*	*01/25/22 22:14*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*01/25/22 10:56*	*01/25/22 22:14*	*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			01/28/22 14:15	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/27/22 16:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/26/22 08:19	01/26/22 12:17	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/26/22 08:19	01/26/22 12:17	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/26/22 08:19	01/26/22 12:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*01/26/22 08:19*	*01/26/22 12:17*	*1*
o-Terphenyl	*100*		*70 - 130*	*01/26/22 08:19*	*01/26/22 12:17*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4090**		25.0		mg/Kg			01/27/22 21:15	5

Client Sample ID: PH01A Lab Sample ID: 890-1863-2

Date Collected: 01/24/22 10:02 **Matrix: Solid**
Date Received: 01/24/22 14:04
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/25/22 10:56	01/25/22 22:34	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/25/22 10:56	01/25/22 22:34	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/25/22 10:56	01/25/22 22:34	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/25/22 10:56	01/25/22 22:34	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/25/22 10:56	01/25/22 22:34	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/25/22 10:56	01/25/22 22:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*01/25/22 10:56*	*01/25/22 22:34*	*1*

Eurofins Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 30 BD FED 126H

Job ID: 890-1863-1
SDG: 31403236.029 Task 04.02

Client Sample ID: PH01A

Lab Sample ID: 890-1863-2
Matrix: Solid

Date Collected: 01/24/22 10:02
Date Received: 01/24/22 14:04
Sample Depth: 2

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*01/25/22 10:56*	*01/25/22 22:34*	*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			01/28/22 14:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**102**		49.9	mg/Kg			01/27/22 16:17	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		01/26/22 08:19	01/26/22 16:19	1
Diesel Range Organics (Over C10-C28)	**102**		49.9	mg/Kg		01/26/22 08:19	01/26/22 16:19	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/26/22 08:19	01/26/22 16:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*83*		*70 - 130*	*01/26/22 08:19*	*01/26/22 16:19*	*1*
o-Terphenyl	*86*		*70 - 130*	*01/26/22 08:19*	*01/26/22 16:19*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**608**		5.00	mg/Kg			01/27/22 21:22	1

Client Sample ID: PH01B

Lab Sample ID: 890-1863-3
Matrix: Solid

Date Collected: 01/24/22 10:05
Date Received: 01/24/22 14:04
Sample Depth: 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0400	U	0.0400	mg/Kg		01/25/22 10:56	01/25/22 22:55	20
Toluene	<0.0400	U	0.0400	mg/Kg		01/25/22 10:56	01/25/22 22:55	20
Ethylbenzene	<0.0400	U	0.0400	mg/Kg		01/25/22 10:56	01/25/22 22:55	20
m-Xylene & p-Xylene	<0.0800	U	0.0800	mg/Kg		01/25/22 10:56	01/25/22 22:55	20
o-Xylene	<0.0400	U	0.0400	mg/Kg		01/25/22 10:56	01/25/22 22:55	20
Xylenes, Total	<0.0800	U	0.0800	mg/Kg		01/25/22 10:56	01/25/22 22:55	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*01/25/22 10:56*	*01/25/22 22:55*	*20*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*01/25/22 10:56*	*01/25/22 22:55*	*20*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0800	U	0.0800	mg/Kg			01/28/22 14:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**79.7**		50.0	mg/Kg			01/27/22 16:17	1

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Client Sample Results

Client: WSP USA Inc. Job ID: 890-1863-1
Project/Site: PLU 30 BD FED 126H SDG: 31403236.029 Task 04.02

Client Sample ID: PH01B **Lab Sample ID: 890-1863-3**
Date Collected: 01/24/22 10:05 **Matrix: Solid**
Date Received: 01/24/22 14:04
Sample Depth: 4

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/26/22 08:19	01/26/22 16:41	1
Diesel Range Organics (Over C10-C28)	**79.7**		50.0		mg/Kg		01/26/22 08:19	01/26/22 16:41	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/26/22 08:19	01/26/22 16:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*01/26/22 08:19*	*01/26/22 16:41*	*1*
o-Terphenyl	*85*		*70 - 130*	*01/26/22 08:19*	*01/26/22 16:41*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**17.6**		4.95		mg/Kg			01/27/22 21:30	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 30 BD FED 126H

Job ID: 890-1863-1
SDG: 31403236.029 Task 04.02

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1862-A-6-C MSD	Matrix Spike Duplicate	124	114
890-1862-A-6-E MS	Matrix Spike	109	109
890-1863-1	PH01	106	100
890-1863-2	PH01A	113	103
890-1863-3	PH01B	118	98
LCS 880-17561/1-B	Lab Control Sample	106	106
LCSD 880-17561/2-B	Lab Control Sample Dup	108	103
MB 880-17651/5-A	Method Blank	104	90
MB 880-17652/41	Method Blank	107	101

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1863-1	PH01	91	100
890-1863-1 MS	PH01	73	69 S1-
890-1863-1 MSD	PH01	77	73
890-1863-2	PH01A	83	86
890-1863-3	PH01B	84	85
LCS 880-17749/2-A	Lab Control Sample	131 S1+	125
LCSD 880-17749/3-A	Lab Control Sample Dup	137 S1+	140 S1+
MB 880-17749/1-A	Method Blank	106	119

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 30 BD FED 126H

Job ID: 890-1863-1
SDG: 31403236.029 Task 04.02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: LCS 880-17561/1-B
Matrix: Solid
Analysis Batch: 17652

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17561

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09177		mg/Kg		92	70 - 130		
Toluene			0.100	0.08763		mg/Kg		88	70 - 130		
Ethylbenzene			0.100	0.08369		mg/Kg		84	70 - 130		
m-Xylene & p-Xylene			0.200	0.1773		mg/Kg		89	70 - 130		
o-Xylene			0.100	0.08641		mg/Kg		86	70 - 130		

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

Lab Sample ID: LCSD 880-17561/2-B
Matrix: Solid
Analysis Batch: 17652

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 17561

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09621		mg/Kg		96	70 - 130	5	35
Toluene			0.100	0.08841		mg/Kg		88	70 - 130	1	35
Ethylbenzene			0.100	0.09085		mg/Kg		91	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.1901		mg/Kg		95	70 - 130	7	35
o-Xylene			0.100	0.09595		mg/Kg		96	70 - 130	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-1862-A-6-C MSD
Matrix: Solid
Analysis Batch: 17652

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 17561

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.100	0.08479		mg/Kg		85	70 - 130	2	35
Toluene	<0.00202	U	0.100	0.07020		mg/Kg		70	70 - 130	5	35
Ethylbenzene	<0.00202	U	0.100	0.07219		mg/Kg		72	70 - 130	2	35
m-Xylene & p-Xylene	<0.00403	U	0.200	0.1481		mg/Kg		74	70 - 130	3	35
o-Xylene	<0.00202	U	0.100	0.07800		mg/Kg		78	70 - 130	2	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: 890-1862-A-6-E MS
Matrix: Solid
Analysis Batch: 17652

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 17561

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00202	U	0.0996	0.08307		mg/Kg		83	70 - 130		
Toluene	<0.00202	U	0.0996	0.07382		mg/Kg		74	70 - 130		
Ethylbenzene	<0.00202	U	0.0996	0.07358		mg/Kg		74	70 - 130		

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QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 30 BD FED 126H

Job ID: 890-1863-1
SDG: 31403236.029 Task 04.02

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

Lab Sample ID: 890-1862-A-6-E MS
Matrix: Solid
Analysis Batch: 17652

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 17561

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1530		mg/Kg		77	70 - 130
o-Xylene	<0.00202	U	0.0996	0.07970		mg/Kg		80	70 - 130

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

Lab Sample ID: MB 880-17651/5-A
Matrix: Solid
Analysis Batch: 17652

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17651

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/25/22 07:13	01/25/22 10:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/25/22 07:13	01/25/22 10:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/25/22 07:13	01/25/22 10:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/25/22 07:13	01/25/22 10:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/25/22 07:13	01/25/22 10:38	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/25/22 07:13	01/25/22 10:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*01/25/22 07:13*	*01/25/22 10:38*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*01/25/22 07:13*	*01/25/22 10:38*	*1*

Lab Sample ID: MB 880-17652/41
Matrix: Solid
Analysis Batch: 17652

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg			01/25/22 21:32	1
Toluene	<0.00200	U	0.00200		mg/Kg			01/25/22 21:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg			01/25/22 21:32	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg			01/25/22 21:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg			01/25/22 21:32	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg			01/25/22 21:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*01/25/22 21:32*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*		*01/25/22 21:32*	*1*

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

Lab Sample ID: MB 880-17749/1-A
Matrix: Solid
Analysis Batch: 17755

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17749

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/26/22 08:19	01/26/22 11:10	1

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 30 BD FED 126H

Job ID: 890-1863-1
SDG: 31403236.029 Task 04.02

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

Lab Sample ID: MB 880-17749/1-A
Matrix: Solid
Analysis Batch: 17755

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17749

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/26/22 08:19	01/26/22 11:10	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/26/22 08:19	01/26/22 11:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*01/26/22 08:19*	*01/26/22 11:10*	*1*
o-Terphenyl	*119*		*70 - 130*	*01/26/22 08:19*	*01/26/22 11:10*	*1*

Lab Sample ID: LCS 880-17749/2-A
Matrix: Solid
Analysis Batch: 17755

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17749

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1093		mg/Kg		109	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1153		mg/Kg		115	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*131*	*S1+*	*70 - 130*
o-Terphenyl	*125*		*70 - 130*

Lab Sample ID: LCSD 880-17749/3-A
Matrix: Solid
Analysis Batch: 17755

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 17749

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1100		mg/Kg		110	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1225		mg/Kg		122	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*137*	*S1+*	*70 - 130*
o-Terphenyl	*140*	*S1+*	*70 - 130*

Lab Sample ID: 890-1863-1 MS
Matrix: Solid
Analysis Batch: 17755

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 17749

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	1106		mg/Kg		111	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	997	964.5		mg/Kg		95	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*73*		*70 - 130*
o-Terphenyl	*69*	*S1-*	*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 30 BD FED 126H

Job ID: 890-1863-1
SDG: 31403236.029 Task 04.02

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

Lab Sample ID: 890-1863-1 MSD
Matrix: Solid
Analysis Batch: 17755

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 17749

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	996	1144		mg/Kg		115	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1028		mg/Kg		101	70 - 130	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*77*		*70 - 130*
o-Terphenyl	*73*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-17707/1-A
Matrix: Solid
Analysis Batch: 17737

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/27/22 17:51	1

Lab Sample ID: LCS 880-17707/2-A
Matrix: Solid
Analysis Batch: 17737

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	274.3		mg/Kg		110	90 - 110		

Lab Sample ID: LCSD 880-17707/3-A
Matrix: Solid
Analysis Batch: 17737

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	273.1		mg/Kg		109	90 - 110	0	20

Lab Sample ID: 890-1857-A-2-D MS
Matrix: Solid
Analysis Batch: 17737

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	17.4		250	284.4		mg/Kg		107	90 - 110		

Lab Sample ID: 890-1857-A-2-E MSD
Matrix: Solid
Analysis Batch: 17737

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	17.4		250	285.1		mg/Kg		107	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1863-1
Project/Site: PLU 30 BD FED 126H SDG: 31403236.029 Task 04.02

GC VOA

Prep Batch: 17561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1863-1	PH01	Total/NA	Solid	5035	
890-1863-2	PH01A	Total/NA	Solid	5035	
890-1863-3	PH01B	Total/NA	Solid	5035	
LCS 880-17561/1-B	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-17561/2-B	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1862-A-6-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
890-1862-A-6-E MS	Matrix Spike	Total/NA	Solid	5035	

Prep Batch: 17651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-17651/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 17652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1863-1	PH01	Total/NA	Solid	8021B	17561
890-1863-2	PH01A	Total/NA	Solid	8021B	17561
890-1863-3	PH01B	Total/NA	Solid	8021B	17561
MB 880-17651/5-A	Method Blank	Total/NA	Solid	8021B	17651
MB 880-17652/41	Method Blank	Total/NA	Solid	8021B	
LCS 880-17561/1-B	Lab Control Sample	Total/NA	Solid	8021B	17561
LCSD 880-17561/2-B	Lab Control Sample Dup	Total/NA	Solid	8021B	17561
890-1862-A-6-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	17561
890-1862-A-6-E MS	Matrix Spike	Total/NA	Solid	8021B	17561

Analysis Batch: 18058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1863-1	PH01	Total/NA	Solid	Total BTEX	
890-1863-2	PH01A	Total/NA	Solid	Total BTEX	
890-1863-3	PH01B	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 17749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1863-1	PH01	Total/NA	Solid	8015NM Prep	
890-1863-2	PH01A	Total/NA	Solid	8015NM Prep	
890-1863-3	PH01B	Total/NA	Solid	8015NM Prep	
MB 880-17749/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-17749/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-17749/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1863-1 MS	PH01	Total/NA	Solid	8015NM Prep	
890-1863-1 MSD	PH01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 17755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1863-1	PH01	Total/NA	Solid	8015B NM	17749
890-1863-2	PH01A	Total/NA	Solid	8015B NM	17749
890-1863-3	PH01B	Total/NA	Solid	8015B NM	17749
MB 880-17749/1-A	Method Blank	Total/NA	Solid	8015B NM	17749
LCS 880-17749/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	17749
LCSD 880-17749/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	17749

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1863-1
Project/Site: PLU 30 BD FED 126H SDG: 31403236.029 Task 04.02

GC Semi VOA (Continued)

Analysis Batch: 17755 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1863-1 MS	PH01	Total/NA	Solid	8015B NM	17749
890-1863-1 MSD	PH01	Total/NA	Solid	8015B NM	17749

Analysis Batch: 17951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1863-1	PH01	Total/NA	Solid	8015 NM	
890-1863-2	PH01A	Total/NA	Solid	8015 NM	
890-1863-3	PH01B	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 17707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1863-1	PH01	Soluble	Solid	DI Leach	
890-1863-2	PH01A	Soluble	Solid	DI Leach	
890-1863-3	PH01B	Soluble	Solid	DI Leach	
MB 880-17707/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-17707/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-17707/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1857-A-2-D MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1857-A-2-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 17737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1863-1	PH01	Soluble	Solid	300.0	17707
890-1863-2	PH01A	Soluble	Solid	300.0	17707
890-1863-3	PH01B	Soluble	Solid	300.0	17707
MB 880-17707/1-A	Method Blank	Soluble	Solid	300.0	17707
LCS 880-17707/2-A	Lab Control Sample	Soluble	Solid	300.0	17707
LCSD 880-17707/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	17707
890-1857-A-2-D MS	Matrix Spike	Soluble	Solid	300.0	17707
890-1857-A-2-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	17707

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1863-1
Project/Site: PLU 30 BD FED 126H SDG: 31403236.029 Task 04.02

Client Sample ID: PH01 Lab Sample ID: 890-1863-1

Date Collected: 01/24/22 10:00 **Matrix: Solid**
Date Received: 01/24/22 14:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17561	01/25/22 10:56	KL	XEN MID
Total/NA	Analysis	8021B		1	17652	01/25/22 22:14	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18058	01/28/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17951	01/27/22 16:17	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17749	01/26/22 08:19	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17755	01/26/22 12:17	AJ	XEN MID
Soluble	Leach	DI Leach			17707	01/25/22 12:33	CH	XEN MID
Soluble	Analysis	300.0		5	17737	01/27/22 21:15	CH	XEN MID

Client Sample ID: PH01A Lab Sample ID: 890-1863-2

Date Collected: 01/24/22 10:02 **Matrix: Solid**
Date Received: 01/24/22 14:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17561	01/25/22 10:56	KL	XEN MID
Total/NA	Analysis	8021B		1	17652	01/25/22 22:34	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18058	01/28/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17951	01/27/22 16:17	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17749	01/26/22 08:19	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17755	01/26/22 16:19	AJ	XEN MID
Soluble	Leach	DI Leach			17707	01/25/22 12:33	CH	XEN MID
Soluble	Analysis	300.0		1	17737	01/27/22 21:22	CH	XEN MID

Client Sample ID: PH01B Lab Sample ID: 890-1863-3

Date Collected: 01/24/22 10:05 **Matrix: Solid**
Date Received: 01/24/22 14:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17561	01/25/22 10:56	KL	XEN MID
Total/NA	Analysis	8021B		20	17652	01/25/22 22:55	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18058	01/28/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17951	01/27/22 16:17	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17749	01/26/22 08:19	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17755	01/26/22 16:41	AJ	XEN MID
Soluble	Leach	DI Leach			17707	01/25/22 12:33	CH	XEN MID
Soluble	Analysis	300.0		1	17737	01/27/22 21:30	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-1863-1
Project/Site: PLU 30 BD FED 126H SDG: 31403236.029 Task 04.02

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

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

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: WSP USA Inc. Job ID: 890-1863-1
Project/Site: PLU 30 BD FED 126H SDG: 31403236.029 Task 04.02

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: WSP USA Inc. Job ID: 890-1863-1
Project/Site: PLU 30 BD FED 126H SDG: 31403236.029 Task 04.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1863-1	PH01	Solid	01/24/22 10:00	01/24/22 14:04	1
890-1863-2	PH01A	Solid	01/24/22 10:02	01/24/22 14:04	2
890-1863-3	PH01B	Solid	01/24/22 10:05	01/24/22 14:04	4

XENCO LABORATORIES

Chain of Custody

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 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

Work Order No: ______

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1/28/2022

Project Manager:	BENJAMIN BELILL	Bill to: (if different)	ADRIAN BAKER
Company Name:	WSP USA	Company Name:	XTO ENERGY INC
Address:	602 W STEVENS ST	Address:	3104 E GREEN ST
City, State ZIP:	CARLSBAD NM 88220	City, State ZIP:	CARLSBAD NM 88220
Phone:	979-854-0852	Email:	BEN.BELILL@WSP.COM

Work Order Comments

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

Project Name:	PLU 30 BD FED 126H	Turn Around	
Project Number:	31403-236 029 TASK 04 02	Routine	X ☐
Project Location	32.19450, -103.91735	Rush:	
Sampler's Name:	PAYTON BENNER	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	(Yes) No
Temperature (°C):	[illegible]	Thermometer ID	[illegible]
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

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	CHLORIDE (EPA 300.0)														Sample Comments
	PH01	S	1-24-22	10:00	1	1	X	X	X														DISCRETE
	PH01A	S	↓	10:02	2	1	X	X	X														↓
	PH01B	S	↓	10:05	4	1	X	X	X														

Pres. Code

890-1863 Chain of Custody

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day received by the lab, if received by 4:00pm

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 [signature]	[signature]	1-27-22 [illegible]	2		
3			4		
5			6		

Revised Date 022619 Rev. 2019.1

1 2 3 4 5 6 7 8 9 10 11 12 13 14

XENCO LABORATORIES

Chain of Custody

Work Order No: ____________

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 Carlsbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
www.xenco.com

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1/28/2022

Project Manager:	BENJAMIN BELILL	Bill to: (if different)	ADRIAN BAKER
Company Name:	WSP USA	Company Name:	XTO ENERGY INC
Address:	507 W. STEVENS ST	Address:	3104 E GREEN ST
City, State ZIP:	CARLSBAD NM 88220	City, State ZIP:	CARLSBAD NM 88220
Phone:	949-854-0852	Email:	BEN.BELILL@WSP.COM

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 30 BD FED 126H	Turn Around	
Project Number:	31403236.029 TASK 04.02	Routine	☐
Project Location	32.09450, -103.91735	Rush:	
Sampler's Name:	PAYTON BINNER	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	(Yes) No
Temperature (°C):	4.6 / 4.4	Thermometer ID	[illegible]
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

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0: 8021)	CHLORIDE (EPA 300.0)	Sample Comments
	PH01	S	24 27	10:00	1	1	X	X	X	DISCRETE
	PH01A	S	↓	10:02	2	1	X	X	X	↓
	PH01B	S	↓	10:05	4	1	X	X	X	

890-1863 Chain of Custody

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day received by the lab, if received by 4:00pm

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 [signature]	[signature]	24 22 17:04	2		
3			4		
5			6		

Revised Date 022619 Rev. 2019.1

CC: 1574091001

Eurofins 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: 890-598 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas		Job #: 890-1863-1
Address: 1211 W Florida Ave, ,	Due Date Requested: 1/28/2022			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: PLU 30 BD FED 126H	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:										
PH01 (890-1863-1)	1/24/22	10 00 Mountain		Solid			X	X	X	X	X	1	
PH01A (890-1863-2)	1/24/22	10 02 Mountain		Solid			X	X	X	X	X	1	
PH01B (890-1863-3)	1/24/22	10 05 Mountain		Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change Eurofins Environment Testing South Central 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 Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central LLC.

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

Empty Kit Relinquished by	Date	Time:	Method of Shipment:

	Date/Time	Company		Date/Time	Company
Relinquished by:	1/24/22		Received by:	1-25-22 1150	
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.	4.5/4.6 .10 IR8

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1863-1
SDG Number: 31403236.029 Task 04.02

Login Number: 1863
List Number: 1
Creator: Olivas, Nathaniel

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1863-1
SDG Number: 31403236.029 Task 04.02

Login Number: 1863
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/25/22 11:57 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-1898-1
Laboratory Sample Delivery Group: 31403236.029 task 04.02
Client Project/Site: PLU 30 BD Fed 126h

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

Attn: Tacoma Morrissey

JKramer

Authorized for release by:
2/4/2022 1:28:03 PM

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

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

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

Client: WSP USA Inc.
Project/Site: PLU 30 BD Fed 126h

Laboratory Job ID: 890-1898-1
SDG: 31403236.029 task 04.02

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Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1898-1
Project/Site: PLU 30 BD Fed 126h SDG: 31403236.029 task 04.02

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc. Job ID: 890-1898-1
Project/Site: PLU 30 BD Fed 126h SDG: 31403236.029 task 04.02

Job ID: 890-1898-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-1898-1

Receipt
The samples were received on 2/1/2022 10:37 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 0.8°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-18258 and analytical batch 880-18331 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-10694-A-41-F 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.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike (MS) recoveries for preparation batch 880-18356 and analytical batch 880-18411 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.SS03 (890-1898-1), SS04 (890-1898-2), SS05 (890-1898-3), SS06 (890-1898-4) and (890-1898-A-1-E MS)

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 30 BD Fed 126h

Job ID: 890-1898-1
SDG: 31403236.029 task 04.02

Client Sample ID: SS03

Lab Sample ID: 890-1898-1
Matrix: Solid
Date Collected: 01/31/22 12:15
Date Received: 02/01/22 10:37
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/02/22 11:00	02/02/22 14:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/02/22 11:00	02/02/22 14:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/02/22 11:00	02/02/22 14:06	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		02/02/22 11:00	02/02/22 14:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/02/22 11:00	02/02/22 14:06	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/02/22 11:00	02/02/22 14:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*70 - 130*	*02/02/22 11:00*	*02/02/22 14:06*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*02/02/22 11:00*	*02/02/22 14:06*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			02/04/22 14:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/03/22 11:27	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/02/22 12:13	02/02/22 13:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/02/22 12:13	02/02/22 13:58	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/02/22 12:13	02/02/22 13:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*02/02/22 12:13*	*02/02/22 13:58*	*1*
o-Terphenyl	*80*		*70 - 130*	*02/02/22 12:13*	*02/02/22 13:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**63.1**	**F1**	4.99		mg/Kg			02/02/22 20:59	1

Client Sample ID: SS04

Lab Sample ID: 890-1898-2
Matrix: Solid
Date Collected: 01/31/22 12:30
Date Received: 02/01/22 10:37
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/02/22 11:00	02/02/22 14:26	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/02/22 11:00	02/02/22 14:26	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/02/22 11:00	02/02/22 14:26	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/02/22 11:00	02/02/22 14:26	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/02/22 11:00	02/02/22 14:26	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/02/22 11:00	02/02/22 14:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*02/02/22 11:00*	*02/02/22 14:26*	*1*

Client Sample Results

Client: WSP USA Inc. Job ID: 890-1898-1
Project/Site: PLU 30 BD Fed 126h SDG: 31403236.029 task 04.02

Client Sample ID: SS04 Lab Sample ID: 890-1898-2

Date Collected: 01/31/22 12:30 **Matrix: Solid**
Date Received: 02/01/22 10:37
Sample Depth: 0.5

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*02/02/22 11:00*	*02/02/22 14:26*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/04/22 14:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/03/22 11:27	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/02/22 12:13	02/02/22 14:19	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/02/22 12:13	02/02/22 14:19	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/02/22 12:13	02/02/22 14:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*02/02/22 12:13*	*02/02/22 14:19*	*1*
o-Terphenyl	*81*		*70 - 130*	*02/02/22 12:13*	*02/02/22 14:19*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50.0**		4.99	mg/Kg			02/02/22 21:18	1

Client Sample ID: SS05 Lab Sample ID: 890-1898-3

Date Collected: 01/31/22 12:45 **Matrix: Solid**
Date Received: 02/01/22 10:37
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/02/22 11:00	02/02/22 14:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/02/22 11:00	02/02/22 14:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/02/22 11:00	02/02/22 14:46	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		02/02/22 11:00	02/02/22 14:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/02/22 11:00	02/02/22 14:46	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		02/02/22 11:00	02/02/22 14:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*02/02/22 11:00*	*02/02/22 14:46*	*1*
1,4-Difluorobenzene (Surr)	*132*	*S1+*	*70 - 130*	*02/02/22 11:00*	*02/02/22 14:46*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			02/04/22 14:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/03/22 11:27	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 30 BD Fed 126h

Job ID: 890-1898-1
SDG: 31403236.029 task 04.02

Client Sample ID: SS05

Date Collected: 01/31/22 12:45
Date Received: 02/01/22 10:37
Sample Depth: 0.5

Lab Sample ID: 890-1898-3
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		02/02/22 12:13	02/02/22 14:40	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/02/22 12:13	02/02/22 14:40	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/02/22 12:13	02/02/22 14:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*02/02/22 12:13*	*02/02/22 14:40*	*1*
o-Terphenyl	*78*		*70 - 130*	*02/02/22 12:13*	*02/02/22 14:40*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**53.2**		4.96		mg/Kg			02/02/22 21:24	1

Client Sample ID: SS06

Date Collected: 01/31/22 13:00
Date Received: 02/01/22 10:37
Sample Depth: 0.5

Lab Sample ID: 890-1898-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/02/22 11:00	02/02/22 15:07	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/02/22 11:00	02/02/22 15:07	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/02/22 11:00	02/02/22 15:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/02/22 11:00	02/02/22 15:07	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/02/22 11:00	02/02/22 15:07	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/02/22 11:00	02/02/22 15:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*02/02/22 11:00*	*02/02/22 15:07*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*02/02/22 11:00*	*02/02/22 15:07*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			02/04/22 14:16	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/03/22 11:27	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/02/22 12:13	02/02/22 15:02	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/02/22 12:13	02/02/22 15:02	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/02/22 12:13	02/02/22 15:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*02/02/22 12:13*	*02/02/22 15:02*	*1*
o-Terphenyl	*88*		*70 - 130*	*02/02/22 12:13*	*02/02/22 15:02*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 30 BD Fed 126h

Job ID: 890-1898-1
SDG: 31403236.029 task 04.02

Client Sample ID: SS06
Date Collected: 01/31/22 13:00
Date Received: 02/01/22 10:37
Sample Depth: 0.5

Lab Sample ID: 890-1898-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	43.1		4.95		mg/Kg			02/02/22 21:30	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 30 BD Fed 126h

Job ID: 890-1898-1
SDG: 31403236.029 task 04.02

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1892-A-1-A MS	Matrix Spike	106	85
890-1892-A-1-B MSD	Matrix Spike Duplicate	99	101
890-1898-1	SS03	77	75
890-1898-2	SS04	90	84
890-1898-3	SS05	119	132 S1+
890-1898-4	SS06	110	113
LCS 880-18258/1-A	Lab Control Sample	90	94
LCSD 880-18258/2-A	Lab Control Sample Dup	101	101
MB 880-18258/5-A	Method Blank	97	79

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)
880-10694-A-41-E MS	Matrix Spike	74	71
880-10694-A-41-F MSD	Matrix Spike Duplicate	74	68 S1-
890-1898-1	SS03	79	80
890-1898-2	SS04	84	81
890-1898-3	SS05	82	78
890-1898-4	SS06	89	88

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO2	OTPH2
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
LCS 880-18166/2-A	Lab Control Sample	71	76
LCSD 880-18166/3-A	Lab Control Sample Dup	81	85
MB 880-18166/1-A	Method Blank	84	83

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 30 BD Fed 126h

Job ID: 890-1898-1
SDG: 31403236.029 task 04.02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-18258/5-A
Matrix: Solid
Analysis Batch: 18331

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18258

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/02/22 08:00	02/02/22 11:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/02/22 08:00	02/02/22 11:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/02/22 08:00	02/02/22 11:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/02/22 08:00	02/02/22 11:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/02/22 08:00	02/02/22 11:12	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/02/22 08:00	02/02/22 11:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*02/02/22 08:00*	*02/02/22 11:12*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*02/02/22 08:00*	*02/02/22 11:12*	*1*

Lab Sample ID: LCS 880-18258/1-A
Matrix: Solid
Analysis Batch: 18331

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18258

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08040		mg/Kg		80	70 - 130		
Toluene			0.100	0.07602		mg/Kg		76	70 - 130		
Ethylbenzene			0.100	0.07693		mg/Kg		77	70 - 130		
m-Xylene & p-Xylene			0.200	0.1446		mg/Kg		72	70 - 130		
o-Xylene			0.100	0.07947		mg/Kg		79	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: LCSD 880-18258/2-A
Matrix: Solid
Analysis Batch: 18331

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18258

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08317		mg/Kg		83	70 - 130	3	35
Toluene			0.100	0.07989		mg/Kg		80	70 - 130	5	35
Ethylbenzene			0.100	0.08203		mg/Kg		82	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1684		mg/Kg		84	70 - 130	15	35
o-Xylene			0.100	0.08378		mg/Kg		84	70 - 130	5	35

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

Lab Sample ID: 890-1892-A-1-A MS
Matrix: Solid
Analysis Batch: 18331

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18258

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00201	U F1	0.101	0.05707	F1	mg/Kg		57	70 - 130		
Toluene	<0.00201	U F1	0.101	0.06223	F1	mg/Kg		62	70 - 130		

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QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 30 BD Fed 126h

Job ID: 890-1898-1
SDG: 31403236.029 task 04.02

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

Lab Sample ID: 890-1892-A-1-A MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 18331 — **Prep Batch: 18258**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00201	U F1	0.101	0.06630	F1	mg/Kg		66	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.202	0.1286	F1	mg/Kg		64	70 - 130
o-Xylene	<0.00201	U F1	0.101	0.06102	F1	mg/Kg		61	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*

Lab Sample ID: 890-1892-A-1-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 18331 — **Prep Batch: 18258**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00201	U F1	0.0998	0.07087		mg/Kg		71	70 - 130	22	35
Toluene	<0.00201	U F1	0.0998	0.06713	F1	mg/Kg		67	70 - 130	8	35
Ethylbenzene	<0.00201	U F1	0.0998	0.06713	F1	mg/Kg		67	70 - 130	1	35
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1374	F1	mg/Kg		69	70 - 130	7	35
o-Xylene	<0.00201	U F1	0.0998	0.06773	F1	mg/Kg		68	70 - 130	10	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

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

Lab Sample ID: MB 880-18166/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 18343 — **Prep Batch: 18166**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/31/22 12:13	02/02/22 11:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/31/22 12:13	02/02/22 11:41	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/31/22 12:13	02/02/22 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*01/31/22 12:13*	*02/02/22 11:41*	*1*
o-Terphenyl	*83*		*70 - 130*	*01/31/22 12:13*	*02/02/22 11:41*	*1*

Lab Sample ID: LCS 880-18166/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 18343 — **Prep Batch: 18166**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10			1000	698.7		mg/Kg		70	70 - 130
Diesel Range Organics (Over C10-C28)			1000	887.6		mg/Kg		89	70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 30 BD Fed 126h

Job ID: 890-1898-1
SDG: 31403236.029 task 04.02

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

Lab Sample ID: LCS 880-18166/2-A
Matrix: Solid
Analysis Batch: 18343

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18166

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	71		70 - 130
o-Terphenyl	76		70 - 130

Lab Sample ID: LCSD 880-18166/3-A
Matrix: Solid
Analysis Batch: 18343

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18166

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	709.4		mg/Kg		71	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	929.6		mg/Kg		93	70 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	85		70 - 130

Lab Sample ID: 880-10694-A-41-E MS
Matrix: Solid
Analysis Batch: 18343

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18166

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	999	761.6		mg/Kg		74	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	999	908.1		mg/Kg		91	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	74		70 - 130
o-Terphenyl	71		70 - 130

Lab Sample ID: 880-10694-A-41-F MSD
Matrix: Solid
Analysis Batch: 18343

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 18166

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	793.9		mg/Kg		78	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	984.5		mg/Kg		99	70 - 130	8	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	74		70 - 130
o-Terphenyl	68	S1-	70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 30 BD Fed 126h

Job ID: 890-1898-1
SDG: 31403236.029 task 04.02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-18356/1-A
Matrix: Solid
Analysis Batch: 18411

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/02/22 20:41	1

Lab Sample ID: LCS 880-18356/2-A
Matrix: Solid
Analysis Batch: 18411

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	260.0		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-18356/3-A
Matrix: Solid
Analysis Batch: 18411

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	234.1		mg/Kg		94	90 - 110	10	20

Lab Sample ID: 890-1898-1 MS
Matrix: Solid
Analysis Batch: 18411

Client Sample ID: SS03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	63.1	F1	250	278.8	F1	mg/Kg		86	90 - 110		

Lab Sample ID: 890-1898-1 MSD
Matrix: Solid
Analysis Batch: 18411

Client Sample ID: SS03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	63.1	F1	250	305.4		mg/Kg		97	90 - 110	9	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1898-1
Project/Site: PLU 30 BD Fed 126h SDG: 31403236.029 task 04.02

GC VOA

Prep Batch: 18258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1898-1	SS03	Total/NA	Solid	5035	
890-1898-2	SS04	Total/NA	Solid	5035	
890-1898-3	SS05	Total/NA	Solid	5035	
890-1898-4	SS06	Total/NA	Solid	5035	
MB 880-18258/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-18258/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-18258/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1892-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-1892-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 18331

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1898-1	SS03	Total/NA	Solid	8021B	18258
890-1898-2	SS04	Total/NA	Solid	8021B	18258
890-1898-3	SS05	Total/NA	Solid	8021B	18258
890-1898-4	SS06	Total/NA	Solid	8021B	18258
MB 880-18258/5-A	Method Blank	Total/NA	Solid	8021B	18258
LCS 880-18258/1-A	Lab Control Sample	Total/NA	Solid	8021B	18258
LCSD 880-18258/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	18258
890-1892-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	18258
890-1892-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	18258

Analysis Batch: 18599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1898-1	SS03	Total/NA	Solid	Total BTEX	
890-1898-2	SS04	Total/NA	Solid	Total BTEX	
890-1898-3	SS05	Total/NA	Solid	Total BTEX	
890-1898-4	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 18166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1898-1	SS03	Total/NA	Solid	8015NM Prep	
890-1898-2	SS04	Total/NA	Solid	8015NM Prep	
890-1898-3	SS05	Total/NA	Solid	8015NM Prep	
890-1898-4	SS06	Total/NA	Solid	8015NM Prep	
MB 880-18166/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-18166/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-18166/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-10694-A-41-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-10694-A-41-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 18343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1898-1	SS03	Total/NA	Solid	8015B NM	18166
890-1898-2	SS04	Total/NA	Solid	8015B NM	18166
890-1898-3	SS05	Total/NA	Solid	8015B NM	18166
890-1898-4	SS06	Total/NA	Solid	8015B NM	18166
MB 880-18166/1-A	Method Blank	Total/NA	Solid	8015B NM	18166
LCS 880-18166/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	18166

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1898-1
Project/Site: PLU 30 BD Fed 126h SDG: 31403236.029 task 04.02

GC Semi VOA (Continued)

Analysis Batch: 18343 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-18166/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	18166
880-10694-A-41-E MS	Matrix Spike	Total/NA	Solid	8015B NM	18166
880-10694-A-41-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	18166

Analysis Batch: 18476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1898-1	SS03	Total/NA	Solid	8015 NM	
890-1898-2	SS04	Total/NA	Solid	8015 NM	
890-1898-3	SS05	Total/NA	Solid	8015 NM	
890-1898-4	SS06	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 18356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1898-1	SS03	Soluble	Solid	DI Leach	
890-1898-2	SS04	Soluble	Solid	DI Leach	
890-1898-3	SS05	Soluble	Solid	DI Leach	
890-1898-4	SS06	Soluble	Solid	DI Leach	
MB 880-18356/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-18356/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-18356/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1898-1 MS	SS03	Soluble	Solid	DI Leach	
890-1898-1 MSD	SS03	Soluble	Solid	DI Leach	

Analysis Batch: 18411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1898-1	SS03	Soluble	Solid	300.0	18356
890-1898-2	SS04	Soluble	Solid	300.0	18356
890-1898-3	SS05	Soluble	Solid	300.0	18356
890-1898-4	SS06	Soluble	Solid	300.0	18356
MB 880-18356/1-A	Method Blank	Soluble	Solid	300.0	18356
LCS 880-18356/2-A	Lab Control Sample	Soluble	Solid	300.0	18356
LCSD 880-18356/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	18356
890-1898-1 MS	SS03	Soluble	Solid	300.0	18356
890-1898-1 MSD	SS03	Soluble	Solid	300.0	18356

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1898-1
Project/Site: PLU 30 BD Fed 126h SDG: 31403236.029 task 04.02

Client Sample ID: SS03 Lab Sample ID: 890-1898-1

Date Collected: 01/31/22 12:15 **Matrix: Solid**
Date Received: 02/01/22 10:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			18258	02/02/22 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	18331	02/02/22 14:06	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18599	02/04/22 14:16	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	18476	02/03/22 11:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			18166	02/02/22 12:13	DM	XEN MID
Total/NA	Analysis	8015B NM		1	18343	02/02/22 13:58	AJ	XEN MID
Soluble	Leach	DI Leach			18356	02/02/22 11:34	CH	XEN MID
Soluble	Analysis	300.0		1	18411	02/02/22 20:59	SC	XEN MID

Client Sample ID: SS04 Lab Sample ID: 890-1898-2

Date Collected: 01/31/22 12:30 **Matrix: Solid**
Date Received: 02/01/22 10:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			18258	02/02/22 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	18331	02/02/22 14:26	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18599	02/04/22 14:16	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	18476	02/03/22 11:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			18166	02/02/22 12:13	DM	XEN MID
Total/NA	Analysis	8015B NM		1	18343	02/02/22 14:19	AJ	XEN MID
Soluble	Leach	DI Leach			18356	02/02/22 11:34	CH	XEN MID
Soluble	Analysis	300.0		1	18411	02/02/22 21:18	SC	XEN MID

Client Sample ID: SS05 Lab Sample ID: 890-1898-3

Date Collected: 01/31/22 12:45 **Matrix: Solid**
Date Received: 02/01/22 10:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			18258	02/02/22 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	18331	02/02/22 14:46	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18599	02/04/22 14:16	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	18476	02/03/22 11:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			18166	02/02/22 12:13	DM	XEN MID
Total/NA	Analysis	8015B NM		1	18343	02/02/22 14:40	AJ	XEN MID
Soluble	Leach	DI Leach			18356	02/02/22 11:34	CH	XEN MID
Soluble	Analysis	300.0		1	18411	02/02/22 21:24	SC	XEN MID

Client Sample ID: SS06 Lab Sample ID: 890-1898-4

Date Collected: 01/31/22 13:00 **Matrix: Solid**
Date Received: 02/01/22 10:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			18258	02/02/22 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	18331	02/02/22 15:07	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18599	02/04/22 14:16	AJ	XEN MID

Eurofins Carlsbad

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1898-1
Project/Site: PLU 30 BD Fed 126h SDG: 31403236.029 task 04.02

Client Sample ID: SS06 **Lab Sample ID: 890-1898-4**
Date Collected: 01/31/22 13:00 **Matrix: Solid**
Date Received: 02/01/22 10:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	18476	02/03/22 11:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			18166	02/02/22 12:13	DM	XEN MID
Total/NA	Analysis	8015B NM		1	18343	02/02/22 15:02	AJ	XEN MID
Soluble	Leach	DI Leach			18356	02/02/22 11:34	CH	XEN MID
Soluble	Analysis	300.0		1	18411	02/02/22 21:30	SC	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-1898-1
Project/Site: PLU 30 BD Fed 126h SDG: 31403236.029 task 04.02

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

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

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: WSP USA Inc. Job ID: 890-1898-1
Project/Site: PLU 30 BD Fed 126h SDG: 31403236.029 task 04.02

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: PLU 30 BD Fed 126h

Job ID: 890-1898-1
SDG: 31403236.029 task 04.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1898-1	SS03	Solid	01/31/22 12:15	02/01/22 10:37	0.5
890-1898-2	SS04	Solid	01/31/22 12:30	02/01/22 10:37	0.5
890-1898-3	SS05	Solid	01/31/22 12:45	02/01/22 10:37	0.5
890-1898-4	SS06	Solid	01/31/22 13:00	02/01/22 10:37	0.5

Chain of Custody

XENCO LABORATORIES

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

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Work Order No: _____

Project Manager:	Tacoma Morrisey	Bill to: (if different)	Adrian Baker
Company Name:	WSP	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:		Email:	tacoma.morrisey@wsp.com, ben.belill@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 30 BD Fed 126H	Turn Around	
Project Number:	314032236.029 Task 04.02	Routine ☐	
P.O. Number:		Rush: 24HR	
Sampler's Name:	Ben Belill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):	1.0/0.8	Thermometer ID		
Received Intact:	Yes No	TNM-007		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-2.2	
Sample Custody Seals:	Yes No N/A	Total Containers:		

ANALYSIS REQUEST

890-1898 Chain of Custody

Work Order Notes

Cost Center:
1576091001

NAPP2132241976

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
SS03	S	1/31/22	1225	0.5'	1	X	X	X	
SS04	S		1230		1	X	X	X	
SS05	S		1245		1	X	X	X	
SS06	S		1300		1	X	X	X	

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

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			2-1-22 8:00 am	2		2.1.22 1035
3				4		
5				6		

Revised Date 051418 Rev 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1898-1
SDG Number: 31403236.029 task 04.02

Login Number: 1898
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1898-1
SDG Number: 31403236.029 task 04.02

Login Number: 1898
List Number: 2
Creator: Kramer, Jessica

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

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

ATTACHMENT 5: SDS – FRICTION REDUCER

PFP INDUSTRIES

SAFETY DATA SHEET

Issuing Date 01-Aug-2019 **Revision Date** 01-Aug-2019 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name POLYglide Xcel-200

Other means of identification

Product Code(s) 10497

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use No information available

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address
PfP Industries
29738 Goynes Rd.
Katy, TX 77493

Manufacturer Address
PfP Industries
29738 Goynes Rd.
Katy, TX 77493

Emergency telephone number

Company Phone Number 281-371-2000

Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 4

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

Warning

Combustible liquid

Appearance Opaque	**Physical state** Liquid	**Odor** Mineral Oil

Precautionary Statements - Prevention
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage
Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other Information
May be harmful in contact with skin
Harmful to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical name	CAS No	Weight-%	Trade secret
Petroleum distillates, hydrotreated light	64742-47-8	40 - 70	

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

Inhalation Remove to fresh air.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Self-protection of the first aider Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Take precautionary measures against static discharges. Do not touch or walk through spilled material.

Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protection equipment. Do not breathe vapor or mist. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use with local exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Opaque
Color	Milky white to yellow
Odor	Mineral Oil
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	No data available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	>= 67 °C / 153 °F	
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	0.97 - 1.03	
Water solubility	Miscible in water	
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	≥150 mm²/s	
Dynamic viscosity	No data available	None known
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document.

ATEmix (oral)	5,005.00 mg/kg
ATEmix (dermal)	2,002.00 mg/kg
ATEmix (inhalation-dust/mist)	5.20 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Petroleum distillates, hydrotreated light 64742-47-8	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Petroleum distillates, hydrotreated light 64742-47-8	-	2.4: 96 h Oncorhynchus mykiss mg/L LC50 static 45: 96 h Pimephales promelas mg/L LC50 flow-through 2.2: 96 h Lepomis macrochirus mg/L LC50 static	-	4720: 96 h Den-dronereides heteropoda mg/L LC50

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

DOT Not regulated. Product does not sustain combustion (49 CFR 173.120(b)(3))

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Complies
KECL	Complies

PICCS	Complies
AICS	Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

US State Regulations This product does not contain any substances regulated by state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards**	2	**Flammability**	2	**Instability** 0	**Physical and chemical properties**	-
HMIS	**Health hazards**	2	**Flammability**	2	**Physical hazards** 0	**Personal protection**	X

Issuing Date 01-Aug-2019

Revision Date 01-Aug-2019

Revision Note No information available.

Disclaimer

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End of Safety Data Sheet

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Oil Conservation Division
1220 S. St Francis Dr.
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CONDITIONS

Action 91341

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 91341
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Revised Closure Report Approved. Please implement 19.15.29.13 NMAC when completing P&A.	3/21/2022