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	nAPP2036555459
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)*
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.18333 Longitude -103.78562
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU 199	Site Type Battery
Date Release Discovered 12/20/2020	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
N	28	24S	31E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 28	Volume Recovered (bbls) 28
☒ Produced Water	Volume Released (bbls) 32	Volume Recovered (bbls) 32
	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: LO reported a release of fluid into lined containment from the oil tank. A vacuum truck was dispatched and recovered all fluid. a 48-hour liner inspection notice was sent to NMOCD District 2. The liner was visually inspected and determined not to be operating as designed. A third-party contractor has been retained for remediation activities.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2036555459
District RP	
Facility ID	
Application ID	

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

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes, by Adrian Baker to Bratcher, Mike, EMNRD'; Venegas, Victoria, EMNRD; Hamlet, Robert, EMNRD; emily.hernandez@state.nm.us; Morgan, Crisha A; BLM_NM_CFO_Spill@blm.gov on Monday, December 21, 2020 9:07 AM via email.

Initial Response

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

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

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

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

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

Printed Name: Kyle Littrell
Title: SH&E Supervisor
Signature:
Date: 12-30-20
email: Kyle_Littrell@xtoenergy.com
Telephone: 432-221-7331

OCD Only

Received by:
Date:

Incident ID	nAPP2036555459
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2036555459
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: Kyle Littrell Title: SH&E Supervisor

Signature: Date:

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2036555459
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: Kyle Littrell Title: SH&E Supervisor

Signature: [signature] Date: DATE MISSING

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

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: 06/08/2022

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 15, 2021

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

RE: Closure Request
Poker Lake Unit 199
Release Date: December 20, 2020
Incident Number nAPP2036555459
Eddy County, New Mexico

To Whom it May Concern:

WSP USA Inc (WSP), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment and soil sampling activities at the Poker Lake Unit 199 (Site) in Unit N, Section 28, Township 24 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil resulting from a release of crude oil and produced water within lined containment at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this Closure Request describing site assessment and delineation activities that have occurred and requesting no further action (NFA) for Incident Number nAPP2036555459.

RELEASE BACKGROUND

On December 20, 2020, the lease operator discovered a release of approximately 28 barrels (bbls) of crude oil and 32 bbls of produced water into lined containment at the Site. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; all 28 bbls of crude oil and 32 bbls of produced water were recovered. A 48-hour advance notice of liner inspection was provided via email to the New Mexico Oil Conservation Division (NMOCD) District II office. A liner integrity inspection was conducted by XTO personnel following the fluid recovery and upon inspection, the liner was determined to be insufficient. XTO reported the release to the NMOCD on a Release Notification Form C-141 on December 30, 2020. The release was assigned Incident Number nAPP2036555459.

SITE CHARACTERIZATION

WSP characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground

surface (bgs) based on existing water well data and newly acquired data from soil borings drilled by XTO for determination of regional groundwater depth:

- The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 321034103465501, located approximately 0.49 miles south-southeast of the Site. The groundwater well was most recently measured in March 1959 and has a reported depth to groundwater of 474 feet bgs and a total depth of 740 feet bgs. Ground surface elevation at the groundwater well location is 3,461 feet above mean sea level (amsl), the same elevation as the Site.
- The next closest permitted well is New Mexico Office of the State Engineer (NMOSE) well C 04479, drilled by XTO on October 9, 2020. The well is located approximately 1.20 miles south-southwest of the Site. Using a truck mounted drill rig equipped with hollow stem auger, the soil boring was advanced to a total depth of 110 feet bgs. 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 was greater than 110 feet bgs. The borehole was properly abandoned with hydrated bentonite chips. Ground surface elevation at the soil boring location is 3,452 feet amsl, which is approximately 9 feet lower in elevation than the Site.
- There are two additional NMOSE wells within a 3-mile radius of the Site that indicate regional depth to groundwater is greater than 100 feet bgs (C 04478 and C 04499). These wells were drilled by XTO during 2020 and 2021 to evaluate regional depth to water in the area. All wells used for depth to groundwater determination are depicted on Figure 1 and the referenced well records are provided in Attachment 1.

The closest continuously flowing water or significant watercourse to the Site is an unnamed watercourse, located approximately 4.27 miles west 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 AND DELINEATION SOIL SAMPLING ACTIVITIES

On January 26, 2021, WSP personnel were at the Site to evaluate the release extent based on information provided on the Form C141 and visual observations. WSP personnel reviewed and verified the Form C-141 incident description (release source and release location). Delineation activities were warranted based on the visual breach in the containment liner.

On February 3, 2021, WSP personnel returned to the Site to conduct delineation activities. One borehole (BH01) was advanced via hand auger at the location of the breach in the liner to assess for the presence or absence of impacted soil. Four additional boreholes (BH02 through BH05) were advanced around the outside of the lined containment to confirm lateral delineation. Boreholes BH01 through BH05 were advanced to a depth of 4 feet bgs. Soil from the boreholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Two delineation soil samples were collected from each borehole at depths of 2 feet bgs and 4 feet bgs. Field screening results and observations for the boreholes were logged on lithologic/soil sampling logs, which are included in Attachment 2. The borehole and delineation soil sample locations are depicted on Figure 2. Photographic documentation of the site assessment and delineation activities are included in Attachment 3. Following delineation activities, the tear in the liner was bonded and repaired by XTO to restore the integrity of the liner.

The delineation 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 Xenco Laboratories (Eurofins Xenco) 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.

SOIL ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples collected from boreholes BH01 through BH05 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

Following the failed liner integrity inspection at the Site, WSP personnel advanced one borehole (BH01) at the location of the tear in the liner to assess for the presence or absence of soil impacts resulting from the December 20, 2020 crude oil and produced water release within lined containment. Four additional boreholes were advanced around the containment to confirm lateral delineation of the release. Delineation soil samples were collected from each borehole at depths of approximately 2 feet and 4 feet bgs. Laboratory analytical results indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in all delineation soil samples. The release was contained laterally by the lined containment and all released fluids were recovered during initial response activities. The tear in the liner was subsequently repaired.

Based on initial response efforts, absence of elevated field screening results, and soil sample laboratory analytical results compliant with the Closure Criteria directly below the tear in the liner, XTO respectfully requests NFA for Incident Number nAPP2036555459.

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

Sincerely,

WSP USA Inc.

Fatima Smith
Assistant Consultant, Geologist

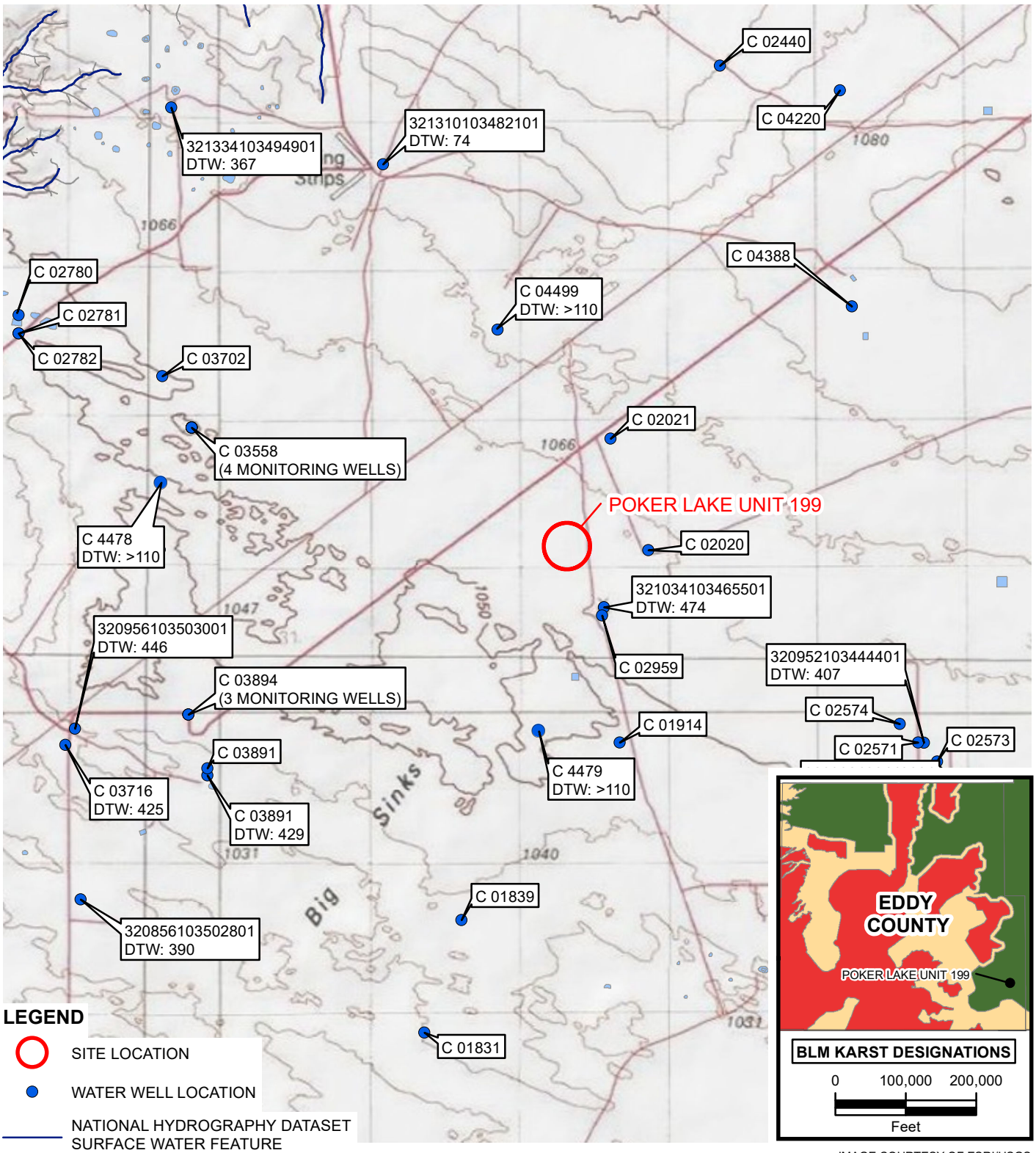
Ashley L. Ager, P.G.
Managing Director, Geologist

cc: Kyle Littrell, XTO
Bureau of Land Management

Attachments:

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

FIGURES



DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT
TD: TOTAL DEPTH IN FEET
NOTE: INCIDENT NUMBER NAPP2036555459

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT 199
UNIT N SEC 28 T24S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC

P:\XTO Energy\GIS\MXD\012921008_PLU 199\012921008_FIG01_SL_RECEPTOR_2021.mxd

IMAGE COURTESY OF ESRI

LEGEND

- RELEASE LOCATION
- DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- RELEASE EXTENT
- CONTAINMENT

NOTE: INCIDENT NUMBER NAPP2036555459
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

0 40 80
Feet

N

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 199
UNIT N SEC 28 T24S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012921008_PLU 199\012921008_FIG02_DELINEATION_2021.mxd

TABLES

Table 1

Soil Analytical Results
Poker Lake Unit 199
Incident Number nAPP2036555459
XTO Energy, Inc
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Samples										
BH01	02/03/2021	2	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	1,160
BH01	02/03/2021	4	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	197
BH02	02/03/2021	2	<0.00199	<0.00199	<50.3	<50.3	<50.3	<50.3	<50.3	10.9
BH02	02/03/2021	4	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	11.6
BH03	02/03/2021	2	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	25.9
BH03	02/03/2021	4	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	70.7
BH04	02/03/2021	2	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	10.5
BH04	02/03/2021	4	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	13.3
BH05	02/03/2021	2	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	10.2
BH05	02/03/2021	4	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	<9.96

Notes

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

ATTACHMENT 1: WELL AND PLUGGING RECORD

USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click to hideNews Bulletins

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 321034103465501

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

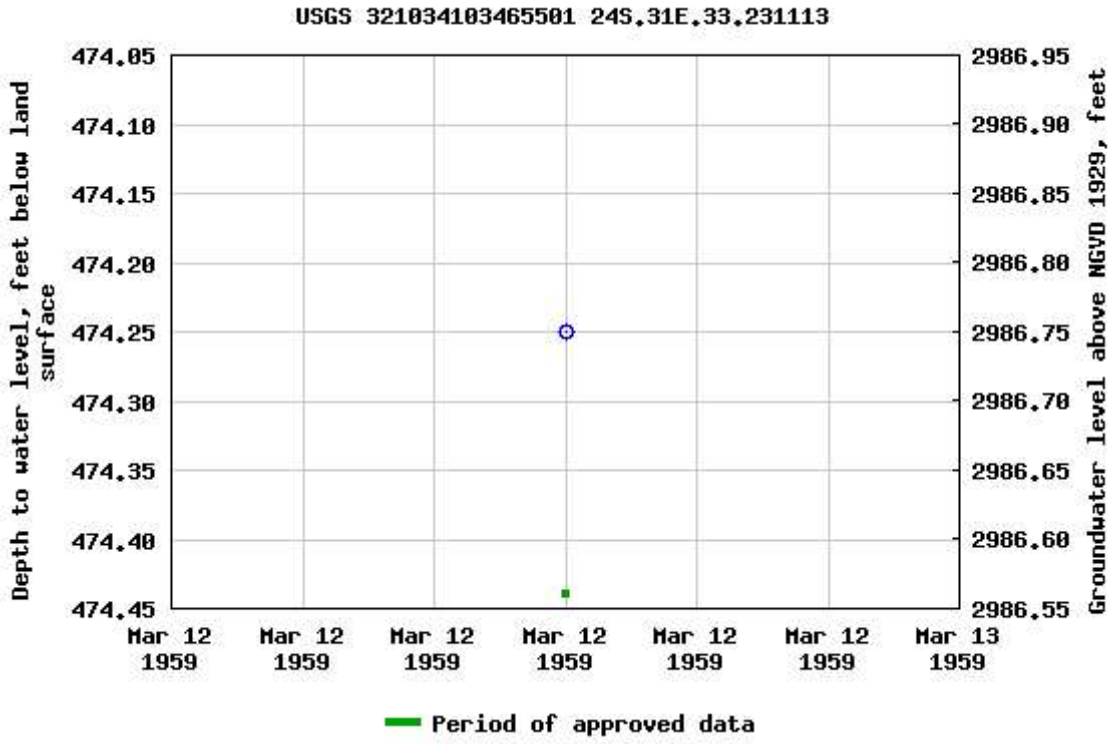
USGS 321034103465501 24S.31E.33.231113

Available data for this site | Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13070001
Latitude 32°10'38.2", Longitude 103°46'53.0" NAD83
Land-surface elevation 3,461.00 feet above NGVD29
The depth of the well is 740 feet below land surface.
This well is completed in the Rustler Formation (312RSLR) 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: 2021-01-26 15:49:13 EST
1.29 0.56 nadww01

Atkins ENGINEERING ASSOCIATES INC.
2904 W 2nd St.
Roswell, NM 88201
voice: 575.624.2420
fax: 575.624.2421
www.atkinseng.com

10/28/2020

DII-NMOSE
1900 W 2nd Street
Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record C-4479 Pod1

To whom it may concern:

Attached please find a well record and a plugging record, in duplicate, for a one (1) soil borings, C-4479 Pod1.

If you have any questions, please contact me at 575.499.9244 or lucas@atkinseng.com.

Sincerely,

Lucas Middleton

Enclosures: as noted above

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (BH-01)	n/a	C-4479

WELL OWNER NAME(S)	PHONE (OPTIONAL)
XTO Energy (Kyle Littrell)	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
6401 Holiday Hill Dr.	Midland	TX	79707

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32°	9'	55.06"	N
	LONGITUDE	-103°	14'	20.45"	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

NE L4 Sec. 04 T25S R31E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
10/09/2020	10/09/2020	temporary well material	110	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY: Hollow Stem Auger

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 (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	110	±8.5	Boring- HSA	--	--	--	--

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

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) 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	4	4	Sand, Medium grained , well-graded Red-Brown	Y ✓ N	
4	20	16	Caliche, poorly consolidated. Brown	Y ✓ N	
20	24	4	Sand, Medium grained , well-graded Red-Brown	Y ✓ N	
24	35	9	Clay, High plasticity, some sand and caliche, Maroon	Y ✓ N	
35	40	5	Sand, Fine-grained , poorly-graded, some clay, moist Red	Y ✓ N	
40	54	14	Sand, Large-grained , well-graded, some clay, moist Red-Brown	Y ✓ N	
54	83	29	Sand, Medium-grained , well-graded, some clay, moist Red-Brown	Y ✓ N	
83	110	27	Sand, Large-grained , well-graded, clay, caliche fragments moist Red-Brown	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

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: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface. Logs adapted from LTE on-site geologist.

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

Shane Eldridge

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 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — 10/26/2020

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 2 OF 2

2020-10-26_C-4479POD1_OSE_Well Record and Log-147-forsign

Final Audit Report 2020-10-27

Created:	2020-10-27
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAA7SkWQIYYffb0w8t6xJlcqiH4I3eFqNWU

"2020-10-26_C-4479POD1_OSE_Well Record and Log-147-forsign" History

Document created by Lucas Middleton (lucas@atkinseng.com)
2020-10-27 - 3:14:56 PM GMT- IP address: 69.21.248.123

Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2020-10-27 - 3:15:10 PM GMT

Email viewed by Jack Atkins (jack@atkinseng.com)
2020-10-27 - 3:23:09 PM GMT- IP address: 74.50.153.115

Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2020-10-27 - 3:23:58 PM GMT - Time Source: server- IP address: 74.50.153.115

Agreement completed.
2020-10-27 - 3:23:58 PM GMT

Adobe Sign

PLUGGING RECORD

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

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: C-4479-POD1

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

Mailing address: 6401 Holiday Hill Dr.

City: Midland State: Texas Zip code: 79707

II. WELL PLUGGING INFORMATION:

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

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

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

4) Date well plugging began: 10/15/2020 Date well plugging concluded: 10/15/2020

5) GPS Well Location: Latitude: 32 deg, 9 min, 55.06 sec
Longitude: -103 deg, 14 min, 20.45 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 84 ft below ground level (bgl), by the following manner: weighted tape

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

8) Date well plugging plan of operations was approved by the State Engineer: 09/22/2020

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

RECEIVED OCT 23 2020

Version: September 8, 2009
Page 1 of 2

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

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	0-10' Hydrated Bentonite	Approx. 31 gallons	29 gallons	Augers	
	10'-110' Drill Cuttings	Approx. 294 gallons	294 gallons	Boring	

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

III. SIGNATURE:

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

Jack Atkins

Signature of Well Driller

10/26/20

Date

Version: September 8, 2009
Page 2 of 2

2020-10-26_C4479-POD1_WD-11 Plugging Record-147-forsign

Final Audit Report 2020-10-27

Created:	2020-10-27
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAADII8PLyW6YcTZmvatQ-KBB5xAD-6_ZF5

"2020-10-26_C4479-POD1_WD-11 Plugging Record-147-forsign " History

Document created by Lucas Middleton (lucas@atkinseng.com)
2020-10-27 - 3:15:22 PM GMT- IP address: 69.21.248.123

Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2020-10-27 - 3:15:34 PM GMT

Email viewed by Jack Atkins (jack@atkinseng.com)
2020-10-27 - 3:24:15 PM GMT- IP address: 74.50.153.115

Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2020-10-27 - 3:25:08 PM GMT - Time Source: server- IP address: 74.50.153.115

Agreement completed.
2020-10-27 - 3:25:08 PM GMT

Adobe Sign

Atkins ENGINEERING ASSOCIATES INC.
2904 W 2nd St.
Roswell, NM 88201
voice: 575.624.2420
fax: 575.624.2421
www.atkinseng.com

10/28/2020

DII-NMOSE
1900 W 2nd Street
Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record C-4478 Pod1

To whom it may concern:

Attached please find a well record and a plugging record, in duplicate, for a one (1) soil borings, C-4478 Pod1.

If you have any questions, please contact me at 575.499.9244 or lucas@atkinseng.com.

Sincerely,

Lucas Middleton

Enclosures: as noted above

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (BH-01)	n/a	C-4478

WELL OWNER NAME(S)	PHONE (OPTIONAL)
XTO Energy (Kyle Littrell)	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
6401 Holiday Hill Dr.	Midland	TX	79707

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32°	11'	22.57"	N
	LONGITUDE	-103°	49'	56.14"	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

SW SE NE Sec. 25 T24S R30E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
10/07/2020	10/07/2020	temporary well material	110	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY: Hollow Stem Auger

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 (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	110	±8.5	Boring- HSA	--	--	--	--

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

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) 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	3	3	Sand, fine-grained, poorly-graded , Red-Brown	Y ✓ N	
3	5	2	Gravel, 20-30 mil, well graded, little clay	Y ✓ N	
5	13	8	Caliche with some gravel (5-20 mil.) Tan/ Brown	Y ✓ N	
13	24	9	Sand, fine-grained, well-graded some silt, Tan/ Red	Y ✓ N	
24	34	10	Sand, Medium-grained, well-graded some silt, Tan/ Red	Y ✓ N	
34	44	10	Sand, Large-grained, well-graded some silt, Dark Brown	Y ✓ N	
44	110	66	Sand, fine-grained, well-graded, some clay, moist, caliche fragments Red/Brown	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

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: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface. Logs adapted from LTE on-site geologist.

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

Shane Eldridge

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 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — 10/26/2020

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 2 OF 2

2020-10-26_C-4478POD1_OSE_Well Record and Log-89-forsign

Final Audit Report 2020-10-27

Created:	2020-10-27
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAESGKFRG9AU3NcytvOCSRntC1Y-zTs43Y

"2020-10-26_C-4478POD1_OSE_Well Record and Log-89-forsign" History

Document created by Lucas Middleton (lucas@atkinseng.com)
2020-10-27 - 3:14:03 PM GMT- IP address: 69.21.248.123

Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2020-10-27 - 3:14:17 PM GMT

Email viewed by Jack Atkins (jack@atkinseng.com)
2020-10-27 - 3:21:12 PM GMT- IP address: 74.50.153.115

Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2020-10-27 - 3:22:09 PM GMT - Time Source: server- IP address: 74.50.153.115

Agreement completed.
2020-10-27 - 3:22:09 PM GMT

Adobe Sign

PLUGGING RECORD

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

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: C-4478-POD1

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

Mailing address: 6401 Holiday Hill Dr.

City: Midland State: Texas Zip code: 79707

II. WELL PLUGGING INFORMATION:

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

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

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

4) Date well plugging began: 10/15/2020 Date well plugging concluded: 10/15/20

5) GPS Well Location: Latitude: 32 deg, 11 min, 22.57 sec
Longitude: -103 deg, 49 min, 56.14 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 68 ft below ground level (bgl), by the following manner: weighted tape

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

8) Date well plugging plan of operations was approved by the State Engineer: 09/02/2020

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

Version: September 8, 2009
Page 1 of 2

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

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
	0-10' Hydrated Bentonite	Approx. 36 gallons	29 gallons	Augers	
	10'-110' Drill Cuttings	Approx. 294 gallons	294 gallons	Boring	

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

III. SIGNATURE:

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

Jack Atkins — Signature of Well Driller

10/26/20 — Date

Version: September 8, 2009
Page 2 of 2

2020-10-26_C4478-POD1_WD-11 Plugging Record-89-forsign

Final Audit Report 2020-10-27

Created:	2020-10-27
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAxP35wvyyp04NflnHwZ2vdtXvQwujXva-

"2020-10-26_C4478-POD1_WD-11 Plugging Record-89-forsign" History

Document created by Lucas Middleton (lucas@atkinseng.com)
2020-10-27 - 3:14:30 PM GMT- IP address: 69.21.248.123

Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2020-10-27 - 3:14:43 PM GMT

Email viewed by Jack Atkins (jack@atkinseng.com)
2020-10-27 - 3:22:22 PM GMT- IP address: 74.50.153.115

Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2020-10-27 - 3:22:56 PM GMT - Time Source: server- IP address: 74.50.153.115

Agreement completed.
2020-10-27 - 3:22:56 PM GMT

Adobe Sign

Atkins ENGINEERING ASSOCIATES INC.
2904 W 2nd St.
Roswell, NM 88201
voice: 575.624.2420
fax: 575.624.2421
www.atkinseng.com

01/20/2021

DII-NMOSE
1900 W 2nd Street
Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record C-4499 Pod1

To whom it may concern:

Attached please find a well record and a plugging record, in duplicate, for a one (1) soil borings, C-4499 Pod1.

If you have any questions, please contact me at 575.499.9244 or lucas@atkinseng.com.

Sincerely,

Lucas Middleton

Enclosures: as noted above

OSE DII JAN 27 2021 PM 3:24

PLUGGING RECORD

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

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: C-4499-POD1

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

Mailing address: 6401 Holiday Hill Dr.

City: Midland State: Texas Zip code: 79707

II. WELL PLUGGING INFORMATION:

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

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

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

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

5) GPS Well Location: Latitude: 32 deg, 12 min, 15.89 sec
Longitude: -104 deg, 47 min, 36.29 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 111 ft below ground level (bgl), by the following manner: weighted tape

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

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

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

Version: September 8, 2009
Page 1 of 2

OSE DIT JAN 27 2021 PM3:25

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

For each interval plugged, describe within the following columns:

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

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

III. SIGNATURE:

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

Jack Atkins — Signature of Well Driller

01/21/2021 — Date

Version: September 8, 2009
Page 2 of 2

2020-1-15_C-4499-POD1_Plugging Record-forsign

Final Audit Report 2021-01-20

Created:	2021-01-20
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAAKYAlMzENwZcWpwbipfZabZszsWa5ksl

"2020-1-15_C-4499-POD1_Plugging Record-forsign" History

Document created by Lucas Middleton (lucas@atkinseng.com)
2021-01-20 - 4:18:16 PM GMT- IP address: 69.21.248.123

Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2021-01-20 - 4:18:36 PM GMT

Email viewed by Jack Atkins (jack@atkinseng.com)
2021-01-20 - 4:24:48 PM GMT- IP address: 74.50.153.115

Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2021-01-20 - 4:27:30 PM GMT - Time Source: server- IP address: 74.50.153.115

Agreement completed.
2021-01-20 - 4:27:30 PM GMT

Adobe Sign

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (MW-1)	n/a	C-4499

WELL OWNER NAME(S)	PHONE (OPTIONAL)
XTO Energy (Kyle Littrell)	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
6401 Holiday Hill Dr.	Midland	TX	79707

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32°	12'	15.89"	N
	LONGITUDE	-103°	47'	36.29"	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

SE NE Sec. 20 T24S R31E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
12/30/2020	12/30/2020	temporary well material	110	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger

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 (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	110	±8.5	Boring- HSA	--	--	--	--

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

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) 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	6	6	SAND, well graded, fine-to-large grain particles red-brown, dry	~~Y~~ ✓ N	
6	8	2	SAND, poorly graded, fine grained little clay mod. plasitcity, red-brown, moist	Y ✓ N	
8	11	3	CALICHE, mod. consolidated, some sand, medium /fine grain, white-tan, dry	Y ✓ N	
11	46	35	CALICHE, mod. consolidated, some sand, medium to fine grain, white-tan, dry.	Y ✓ N	
46	74	28	SAND, well-graded, medium grain,caliche gravel (1-4mm), light brown, dry.	Y ✓ N	
74	110	36	SAND, well-graded, fine/large grain, few clay, cohesive, red-brown, dry	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

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: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface. Logs adapted from WSP on-site geologist.

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

Shane Eldridge

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 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — 01/15/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 2 OF 2

RECEIVED JAN 27 2021

2021-1-15_C-4499_POD1_OSE_Well Record and Log_plu129-forsign

Final Audit Report 2021-01-15

Created:	2021-01-15
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAgs296c366oClflrLCiy9WDKJlrUnq-9u

"2021-1-15_C-4499_POD1_OSE_Well Record and Log_plu129-forsign" History

Document created by Lucas Middleton (lucas@atkinseng.com)
2021-01-15 - 8:45:00 PM GMT- IP address: 69.21.248.123

Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2021-01-15 - 8:45:35 PM GMT

Email viewed by Jack Atkins (jack@atkinseng.com)
2021-01-15 - 9:05:13 PM GMT- IP address: 74.50.153.115

Document e-signed by Jack Atkins (jack@atkinseng.com)
Signature Date: 2021-01-15 - 9:13:18 PM GMT - Time Source: server- IP address: 74.50.153.115

Agreement completed.
2021-01-15 - 9:13:18 PM GMT

OSE OIL JAN 27 2021 PM3:25

Adobe Sign

ATTACHMENT 2: LITHOLOGIC/SOIL SAMPLING LOG

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH or PH Name: BH01	Date: 02/03/2021
	Site Name: Poker Lake Unit 199	
	RP or Incident Number: nAPP2036555459	
	WSP Job Number: TE012921008	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS	Method: Hand Auger
Lat/Long: 32.183372, -103.785605 Field Screening: Hach chloride strips, PID	Hole Diameter: 2 inches	Total Depth: 4 ft bgs

Comments: All chlorides field screenings include a 40% correction factor
M - moist; D - dry; Y - yes; N - no; SAA - same as above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
			Y			0	CCHE	CALICHE, moist, poorly consolidated, off-white, trace white crusting, no odor
M	1,299	0.3	N		1	1	SP	SAND, moist, reddish brown, poorly sorted, fine-very fine grain, no stain, no odor
M	1,657	0.2	N	BH01	2	2	SP	SAA
M	935	0.0	N		3	3	SP	SAA
M	274	0.0	N	BH01	4	4	SP	SAA

TD: 4 ft bgs

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH or PH Name: BH02	Date: 02/03/2021
	Site Name: Poker Lake Unit 199	
	RP or Incident Number: nAPP2036555459	
	WSP Job Number: TE012921008	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS	Method: Hand Auger
Lat/Long: 32.183362, -103.785517 Field Screening: Hach chloride strips, PID	Hole Diameter: 2 inches	Total Depth: 4 ft bgs

Comments: All chlorides field screenings include a 40% correction factor
M - moist; D - dry; Y - yes; N - no; SAA - same as above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
			N			0	CCHE	CALICHE, moist, poorly consolidated, off-white, no stain, no odor
M	<168	0.0	N		1	1	SP	SAND, moist, reddish brown, poorly sorted, fine-very fine grain, no stain, no odor
D	<168	0.0	N	BH02	2	2	SP	SAA
					3	3	SP	SAA
D	<168	0.0	N	BH02	4	4	SP	SAA

TD: 4 ft bgs

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH or PH Name: BH03	Date: 02/03/2021
	Site Name: Poker Lake Unit 199	
	RP or Incident Number: nAPP2036555459	
	WSP Job Number: TE012921008	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS	Method: Hand Auger
Lat/Long: 32.18428, -103.785599 Field Screening: Hach chloride strips, PID	Hole Diameter: 2 inches	Total Depth: 4 ft bgs

Comments: All chlorides field screenings include a 40% correction factor
M - moist; D - dry; Y - yes; N - no; SAA - same as above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
			N			0	CCHE	CALICHE, moist, poorly consolidated, off-white, no stain, no odor
M	<168	0.0	N		1	1	SP	SAND, moist, reddish brown, poorly sorted, fine-very fine grain, no stain, no odor
D	<168	0.0	N	BH03	2	2	SP	SAA
					3	3	SP	SAA
D	<168	0.0	N	BH03	4	4	SP	trace clay, no plasticity, cohesive

TD: 4 ft bgs

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH or PH Name: BH04	Date: 02/03/2021
	Site Name: Poker Lake Unit 199	
	RP or Incident Number: nAPP2036555459	
	WSP Job Number: TE012921008	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS	Method: Hand Auger
Lat/Long: 32.183224, -103.785684 Field Screening: Hach chloride strips, PID	Hole Diameter: 2 inches	Total Depth: 4 ft bgs

Comments: All chlorides field screenings include a 40% correction factor
M - moist; D - dry; Y - yes; N - no; SAA - same as above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
			N			0	CCHE	CALICHE, moist, poorly consolidated, off-white, no stain, no odor
D	<168	0.0	N		1	1	SP	SAND, moist, reddish brown, poorly sorted, fine-very fine grain, no stain, no odor
D	<168	0.0	N	BH04	2	2	SP	SAA
					3	3	SP	SAA
D	<168	0.0	N	BH04	4	4	SP	SAA

TD: 4 ft bgs

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH or PH Name: BH05	Date: 02/03/2021
	Site Name: Poker Lake Unit 199	
	RP or Incident Number: nAPP2036555459	
	WSP Job Number: TE012921008	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: FS	Method: Hand Auger
Lat/Long: 32.183410, -103.785675 Field Screening: Hach chloride strips, PID	Hole Diameter: 2 inches	Total Depth: 4 ft bgs

Comments: All chlorides field screenings include a 40% correction factor
M - moist; D - dry; Y - yes; N - no; SAA - same as above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
			N			0	CCHE	CALICHE, moist, poorly consolidated, off-white, no stain, no odor
D	515	0.0	N		1	1	SP	SAND, moist, reddish brown, poorly sorted, fine-very fine grain, no stain, no odor
D	459	0.0	N	BH05	2	2	SP	SAA
					3	3	SP	SAA
D	459	0.0	N	BH05	4	4	SP	SAA

TD: 4 ft bgs

ATTACHMENT 3: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG		
XTO Energy, Inc	Poker Lake Unit 199 Eddy County, New Mexico	TE012921008

Photo No.	Date
1	January 26, 2021

Location of 2-inch liner breach within lined steel containment facing Northwest.

Photo No.	Date
2	February 3, 2021

Borehole (BH01) within containment facing Southwest.

PHOTOGRAPHIC LOG		
XTO Energy, Inc	Poker Lake Unit 199 Eddy County, New Mexico	TE012921008

Photo No.	Date
3	February 3, 2021

Borehole (BH02) facing North.

Photo No.	Date
4	February 3, 2021

Borehole (BH03) facing East.

PHOTOGRAPHIC LOG		
XTO Energy, Inc	Poker Lake Unit 199 Eddy County, New Mexico	TE012921008

Photo No.	Date	
5	February 3, 2021	
Borehole (BH04) facing North-Northeast.		

Photo No.	Date	
6	February 3, 2021	
Borehole (BH05) facing South-Southwest.		

ATTACHMENT 4: LABORATORY ANALYTICAL RESULTS

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-128-1
Laboratory Sample Delivery Group: TE012921008
Client Project/Site: PLU 199

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

Attn: Dan Moir

JKramer

Authorized for release by:
2/8/2021 4:01:16 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 199

Laboratory Job ID: 890-128-1
SDG: TE012921008

Table of Contents

Definitions/Glossary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-128-1
SDG: TE012921008

Qualifiers

GC VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-128-1
SDG: TE012921008

Job ID: 890-128-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-128-1

Receipt
The samples were received on 2/3/2021 2:24 PM; 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
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.

Detection Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-128-1
SDG: TE012921008

Client Sample ID: 89-128-1 — Lab Sample ID: 687338-001

No Detections.

Client Sample ID: 89-128-2 — Lab Sample ID: 687338-002

No Detections.

Client Sample ID: BH01 — Lab Sample ID: 890-128-1

Sample Analysis Not Complete.

Client Sample ID: BH01 — Lab Sample ID: 890-128-2

Sample Analysis Not Complete.

This Detection Summary does not include radiochemical test results.

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-128-1
SDG: TE012921008

Client Sample ID: 89-128-1

Lab Sample ID: 687338-001
Date Collected:
Matrix: Solid
Date Received:

Method: SW8015 - TPH by SW8015 Mod

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	ND		50.0		mg/kg		02/08/21 12:00	02/08/21 12:29	1
Gasoline Range Hydrocarbons (GRO)	ND		50.0		mg/kg		02/08/21 12:00	02/08/21 12:29	1
Motor Oil Range Hydrocarbons (MRO)	ND		50.0		mg/kg		02/08/21 12:00	02/08/21 12:29	1
Total TPH	ND		50.0		mg/kg		02/08/21 12:00	02/08/21 12:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 135*	*02/08/21 12:00*	*02/08/21 12:29*	*1*
o-Terphenyl	*105*		*70 - 135*	*02/08/21 12:00*	*02/08/21 12:29*	*1*

Client Sample ID: 89-128-2

Lab Sample ID: 687338-002
Date Collected:
Matrix: Solid
Date Received:

Method: SW8015 - TPH by SW8015 Mod

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	ND		50.0		mg/kg		02/08/21 12:00	02/08/21 13:33	1
Gasoline Range Hydrocarbons (GRO)	ND		50.0		mg/kg		02/08/21 12:00	02/08/21 13:33	1
Motor Oil Range Hydrocarbons (MRO)	ND		50.0		mg/kg		02/08/21 12:00	02/08/21 13:33	1
Total TPH	ND		50.0		mg/kg		02/08/21 12:00	02/08/21 13:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 135*	*02/08/21 12:00*	*02/08/21 13:33*	*1*
o-Terphenyl	*108*		*70 - 135*	*02/08/21 12:00*	*02/08/21 13:33*	*1*

Client Sample ID: BH01

Lab Sample ID: 890-128-1
Date Collected: 02/03/21 09:32
Matrix: Solid
Date Received: 02/03/21 14:24

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		02/03/21 15:00	02/04/21 01:33	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		02/03/21 15:00	02/04/21 01:33	1
Toluene	<0.00198	U	0.00198		mg/Kg		02/03/21 15:00	02/04/21 01:33	1
Total BTEX	<0.00198	U	0.00198		mg/Kg		02/03/21 15:00	02/04/21 01:33	1
Xylenes, Total	<0.00198	U	0.00198		mg/Kg		02/03/21 15:00	02/04/21 01:33	1
m,p-Xylenes	<0.00396	U	0.00396		mg/Kg		02/03/21 15:00	02/04/21 01:33	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		02/03/21 15:00	02/04/21 01:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*105*		*70 - 130*	*02/03/21 15:00*	*02/04/21 01:33*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*02/03/21 15:00*	*02/04/21 01:33*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1160**	**F1**	49.5		mg/Kg			02/03/21 21:06	5

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-128-1
SDG: TE012921008

Client Sample ID: BH01

Date Collected: 02/03/21 09:50
Date Received: 02/03/21 14:24

Lab Sample ID: 890-128-2

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		02/03/21 15:00	02/04/21 01:55	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/03/21 15:00	02/04/21 01:55	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/03/21 15:00	02/04/21 01:55	1
Total BTEX	<0.00199	U	0.00199		mg/Kg		02/03/21 15:00	02/04/21 01:55	1
Xylenes, Total	<0.00199	U	0.00199		mg/Kg		02/03/21 15:00	02/04/21 01:55	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		02/03/21 15:00	02/04/21 01:55	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/03/21 15:00	02/04/21 01:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*106*		*70 - 130*	*02/03/21 15:00*	*02/04/21 01:55*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*02/03/21 15:00*	*02/04/21 01:55*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**197**		9.96		mg/Kg			02/03/21 21:23	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-128-1
SDG: TE012921008

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		DFBZ1	BFB1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-122-A-1-E MS	Matrix Spike	102	99
890-122-A-1-F MSD	Matrix Spike Duplicate	100	102
890-128-1	BH01	105	102
890-128-2	BH01	106	100
LCS 890-124/2-A	Lab Control Sample	98	94
LCSD 890-124/3-A	Lab Control Sample Dup	101	94
MB 890-124/1-A	Method Blank	105	101

Surrogate Legend

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

Method: SW8015 - TPH by SW8015 Mod

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO	OTPH
Lab Sample ID	Client Sample ID	(70-135)	(70-135)
687338-001	89-128-1	104	105
687338-002	89-128-2	109	108

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-128-1
SDG: TE012921008

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 890-124/1-A
Matrix: Solid
Analysis Batch: 129

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 124

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/02/21 21:08	02/03/21 17:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/02/21 21:08	02/03/21 17:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/02/21 21:08	02/03/21 17:41	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		02/02/21 21:08	02/03/21 17:41	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg		02/02/21 21:08	02/03/21 17:41	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/02/21 21:08	02/03/21 17:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/02/21 21:08	02/03/21 17:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*105*		*70 - 130*	*02/02/21 21:08*	*02/03/21 17:41*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*02/02/21 21:08*	*02/03/21 17:41*	*1*

Lab Sample ID: LCS 890-124/2-A
Matrix: Solid
Analysis Batch: 129

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 124

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09638		mg/Kg		96	70 - 130		
Ethylbenzene			0.100	0.09436		mg/Kg		94	71 - 129		
Toluene			0.100	0.09632		mg/Kg		96	70 - 130		
m,p-Xylenes			0.200	0.1877		mg/Kg		94	70 - 135		
o-Xylene			0.100	0.09498		mg/Kg		95	71 - 133		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Difluorobenzene	*98*		*70 - 130*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: LCSD 890-124/3-A
Matrix: Solid
Analysis Batch: 129

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 124

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1000		mg/Kg		100	70 - 130	4	35
Ethylbenzene			0.100	0.09594		mg/Kg		96	71 - 129	2	35
Toluene			0.100	0.1001		mg/Kg		100	70 - 130	4	35
m,p-Xylenes			0.200	0.1885		mg/Kg		94	70 - 135	0	35
o-Xylene			0.100	0.09635		mg/Kg		96	71 - 133	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Difluorobenzene	*101*		*70 - 130*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 890-122-A-1-E MS
Matrix: Solid
Analysis Batch: 129

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 124

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00201	U	0.101	0.09515		mg/Kg		94	70 - 130		

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-128-1
SDG: TE012921008

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

Lab Sample ID: 890-122-A-1-E MS
Matrix: Solid
Analysis Batch: 129

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 124

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00201	U	0.101	0.08905		mg/Kg		89	71 - 129
Toluene	<0.00201	U	0.101	0.09208		mg/Kg		92	70 - 130
m,p-Xylenes	<0.00402	U	0.201	0.1760		mg/Kg		87	70 - 135
o-Xylene	<0.00201	U	0.101	0.09063		mg/Kg		90	71 - 133

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,4-Difluorobenzene	*102*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-122-A-1-F MSD
Matrix: Solid
Analysis Batch: 129

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 124

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0996	0.08835		mg/Kg		88	70 - 130	7	35
Ethylbenzene	<0.00201	U	0.0996	0.08303		mg/Kg		83	71 - 129	7	35
Toluene	<0.00201	U	0.0996	0.08618		mg/Kg		87	70 - 130	7	35
m,p-Xylenes	<0.00402	U	0.199	0.1631		mg/Kg		82	70 - 135	8	35
o-Xylene	<0.00201	U	0.0996	0.08407		mg/Kg		84	71 - 133	8	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,4-Difluorobenzene	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 890-133/1-A
Matrix: Solid
Analysis Batch: 137

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			02/03/21 20:49	1

Lab Sample ID: LCS 890-133/2-A
Matrix: Solid
Analysis Batch: 137

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride			500	496.2		mg/Kg		99	90 - 110

Lab Sample ID: LCSD 890-133/3-A
Matrix: Solid
Analysis Batch: 137

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			500	493.5		mg/Kg		99	90 - 110	1	20

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-128-1
SDG: TE012921008

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-128-1 MS
Matrix: Solid
Analysis Batch: 137

Client Sample ID: BH01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1160	F1	498	1711		mg/Kg		110	90 - 110

Lab Sample ID: 890-128-1 MSD
Matrix: Solid
Analysis Batch: 137

Client Sample ID: BH01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1160	F1	499	1585	F1	mg/Kg		84	90 - 110	8	20

Method: SW8015 - Semi-Volatiles

Lab Sample ID: 7721032-1-BLK
Matrix: SOIL
Analysis Batch: 3150314

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3150314_P

Analyte	BLANK Result	BLANK Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	U		50		mg/kg		02/08/21 12:00	02/08/21 11:26	1
Gasoline Range Hydrocarbons (GRO)	U		50		mg/kg		02/08/21 12:00	02/08/21 11:26	1
Motor Oil Range Hydrocarbons (MRO)	U		50		mg/kg		02/08/21 12:00	02/08/21 11:26	1

Lab Sample ID: 7721032-1-BKS
Matrix: SOIL
Analysis Batch: 3150314

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3150314_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO)	1000	1100		mg/kg		110	70 - 135
Gasoline Range Hydrocarbons (GRO)	1000	1090		mg/kg		109	70 - 135

Lab Sample ID: 7721032-1-BSD
Matrix: SOIL
Analysis Batch: 3150314

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3150314_P

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO)	1000	1200		mg/kg		120	70 - 135	9	20
Gasoline Range Hydrocarbons (GRO)	1000	1090		mg/kg		109	70 - 135	0	20

Lab Sample ID: 687338-001 S
Matrix: SOIL
Analysis Batch: 3150314

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 3150314_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO)	<49.9		998	1170		mg/kg		117	70 - 135
Gasoline Range Hydrocarbons (GRO)	<49.9		998	1150		mg/kg		115	70 - 135

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-128-1
SDG: TE012921008

Method: SW8015 - Semi-Volatiles (Continued)

Lab Sample ID: 687338-001 SD
Matrix: SOIL
Analysis Batch: 3150314

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 3150314_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO)	<49.9		997	1090		mg/kg		109	70 - 135	7	20
Gasoline Range Hydrocarbons (GRO)	<49.9		997	1020		mg/kg		102	70 - 135	12	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-128-1
SDG: TE012921008

GC VOA

Prep Batch: 124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-128-1	BH01	Total/NA	Solid	5030C	
890-128-2	BH01	Total/NA	Solid	5030C	
MB 890-124/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 890-124/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 890-124/3-A	Lab Control Sample Dup	Total/NA	Solid	5030C	
890-122-A-1-E MS	Matrix Spike	Total/NA	Solid	5030C	
890-122-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5030C	

Analysis Batch: 129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-128-1	BH01	Total/NA	Solid	8021B	124
890-128-2	BH01	Total/NA	Solid	8021B	124
MB 890-124/1-A	Method Blank	Total/NA	Solid	8021B	124
LCS 890-124/2-A	Lab Control Sample	Total/NA	Solid	8021B	124
LCSD 890-124/3-A	Lab Control Sample Dup	Total/NA	Solid	8021B	124
890-122-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	124
890-122-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	124

HPLC/IC

Leach Batch: 133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-128-1	BH01	Soluble	Solid	DI Leach	
890-128-2	BH01	Soluble	Solid	DI Leach	
MB 890-133/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 890-133/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 890-133/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-128-1 MS	BH01	Soluble	Solid	DI Leach	
890-128-1 MSD	BH01	Soluble	Solid	DI Leach	

Analysis Batch: 137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-128-1	BH01	Soluble	Solid	300.0	133
890-128-2	BH01	Soluble	Solid	300.0	133
MB 890-133/1-A	Method Blank	Soluble	Solid	300.0	133
LCS 890-133/2-A	Lab Control Sample	Soluble	Solid	300.0	133
LCSD 890-133/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	133
890-128-1 MS	BH01	Soluble	Solid	300.0	133
890-128-1 MSD	BH01	Soluble	Solid	300.0	133

Subcontract

Analysis Batch: 3150314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
687338-001	89-128-1	Total/NA	Solid	SW8015	3150314_P
687338-002	89-128-2	Total/NA	Solid	SW8015	3150314_P
7721032-1-BLK	Method Blank	Total/NA	SOIL	SW8015	3150314_P
7721032-1-BKS	Lab Control Sample	Total/NA	SOIL	SW8015	3150314_P
7721032-1-BSD	Lab Control Sample Dup	Total/NA	SOIL	SW8015	3150314_P
687338-001 S	Matrix Spike	Total/NA	SOIL	SW8015	3150314_P
687338-001 SD	Matrix Spike Duplicate	Total/NA	SOIL	SW8015	3150314_P

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-128-1
SDG: TE012921008

Subcontract

Prep Batch: 3150314_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
687338-001	89-128-1	Total/NA	Solid	SW8015P	
687338-002	89-128-2	Total/NA	Solid	SW8015P	
7721032-1-BLK	Method Blank	Total/NA	SOIL	***DEFAULT PREP***	
7721032-1-BKS	Lab Control Sample	Total/NA	SOIL	***DEFAULT PREP***	
7721032-1-BSD	Lab Control Sample Dup	Total/NA	SOIL	***DEFAULT PREP***	
687338-001 S	Matrix Spike	Total/NA	SOIL	***DEFAULT PREP***	
687338-001 SD	Matrix Spike Duplicate	Total/NA	SOIL	***DEFAULT PREP***	

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-128-1
SDG: TE012921008

Client Sample ID: 89-128-1
Date Collected:
Date Received:

Lab Sample ID: 687338-001
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SW8015P		1	3150314_P	02/08/21 12:00		
Total/NA	Analysis	SW8015		1	3150314	02/08/21 12:29	ARM	

Client Sample ID: 89-128-2
Date Collected:
Date Received:

Lab Sample ID: 687338-002
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SW8015P		1	3150314_P	02/08/21 12:00		
Total/NA	Analysis	SW8015		1	3150314	02/08/21 13:33	ARM	

Client Sample ID: BH01
Date Collected: 02/03/21 09:32
Date Received: 02/03/21 14:24

Lab Sample ID: 890-128-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			124	02/03/21 15:00	MC	XC
Total/NA	Analysis	8021B		1	129	02/04/21 01:33	MC	XC
Soluble	Leach	DI Leach			133	02/03/21 17:27	MC	XC
Soluble	Analysis	300.0		5	137	02/03/21 21:06	MC	XC

Client Sample ID: BH01
Date Collected: 02/03/21 09:50
Date Received: 02/03/21 14:24

Lab Sample ID: 890-128-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			124	02/03/21 15:00	MC	XC
Total/NA	Analysis	8021B		1	129	02/04/21 01:55	MC	XC
Soluble	Leach	DI Leach			133	02/03/21 17:27	MC	XC
Soluble	Analysis	300.0		1	137	02/03/21 21:23	MC	XC

Laboratory References:
XC = Eurofins Xenco, Carlsbad, 1089 N Canal St., Carlsbad, NM 88220, TEL (575)988-3199

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-128-1
SDG: TE012921008

Laboratory: Eurofins Xenco, Carlsbad

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

Authority	Program	Identification Number	Expiration Date
Louisiana	NELAP	05092	06-30-21

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
8021B	5030C	Solid	Total BTEX

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

Method Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-128-1
SDG: TE012921008

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XC
300.0	Anions, Ion Chromatography	MCAWW	XC
5030C	Purge and Trap	SW846	XC
DI Leach	Deionized Water Leaching Procedure	ASTM	XC

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

XC = Eurofins Xenco, Carlsbad, 1089 N Canal St., Carlsbad, NM 88220, TEL (575)988-3199

Sample Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-128-1
SDG: TE012921008

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
687338-001	89-128-1	Solid			
687338-002	89-128-2	Solid			
890-128-1	BH01	Solid	02/03/21 09:32	02/03/21 14:24	
890-128-2	BH01	Solid	02/03/21 09:50	02/03/21 14:24	

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 Crasbad, 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 Page 1 of 1

2/8/2021

Project Manager:	Joseph Hernandez	Bill to: (if different)	Kyle Littrell
Company Name:	WSP, Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(281) 702-2329	Email:	joseph.hernandez@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 199	Turn Around	
Project Number:	TE012921008	Routine ☐	
Project Location	Eddy county	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	1.8/0.8	Thermometer ID	
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	2

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA O = 8021)	Chloride (EPA 300.0)	Sample Comments
	BH01	S	2/3/21	0932	2'	1		X	X	X	
	BH01	S	2/3/21	0950	4'	1		X	X	X	

ANALYSIS REQUEST

Preservative Codes

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

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

890-128 Chain of Custody

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

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

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			2.3.21 1424			
3						
5				6		

Revised Date 022619 Rev. 2019 1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-128-1
SDG Number: TE012921008

Login Number: 128
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").	True	

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-130-1
Laboratory Sample Delivery Group: TE012921008
Client Project/Site: PLU 199
Revision: 1

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

Attn: Dan Moir

JKramer

Authorized for release by:
2/11/2021 9:39:11 AM

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

Client: WSP USA Inc.
Project/Site: PLU 199

Laboratory Job ID: 890-130-1
SDG: TE012921008

Table of Contents

Definitions/Glossary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-130-1
SDG: TE012921008

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-130-1
SDG: TE012921008

Job ID: 890-130-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-130-1

REVISION

The report being provided is a revision of the original report sent on 2/10/2021. The report (revision 1) is being revised due to Corrected certificate summary for TPH 8015.

Report revision history

Receipt
The samples were received on 2/3/2021 2:20 PM; 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
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-130-1
SDG: TE012921008

Client Sample ID: BH02
Date Collected: 02/03/21 10:53
Date Received: 02/03/21 14:20

Lab Sample ID: 890-130-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/05/21 08:01	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/05/21 08:01	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/05/21 08:01	1
Total BTEX	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/05/21 08:01	1
Xylenes, Total	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/05/21 08:01	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		02/03/21 19:53	02/05/21 08:01	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/05/21 08:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*103*		*70 - 130*	*02/03/21 19:53*	*02/05/21 08:01*	*1*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*02/03/21 19:53*	*02/05/21 08:01*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<50.3	U	50.3		mg/Kg		02/06/21 15:46	02/09/21 20:44	1
Total TPH	<50.3	U	50.3		mg/Kg		02/06/21 15:46	02/09/21 20:44	1
>C10-C28	<50.3	U	50.3		mg/Kg		02/06/21 15:46	02/09/21 20:44	1
>C28-C35	<50.3	U	50.3		mg/Kg		02/06/21 15:46	02/09/21 20:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 135*	*02/06/21 15:46*	*02/09/21 20:44*	*1*
o-Terphenyl	*100*		*70 - 135*	*02/06/21 15:46*	*02/09/21 20:44*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.9**		10.0		mg/Kg			02/03/21 21:28	1

Client Sample ID: BH02
Date Collected: 02/03/21 10:56
Date Received: 02/03/21 14:20

Lab Sample ID: 890-130-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		02/03/21 19:53	02/05/21 09:21	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		02/03/21 19:53	02/05/21 09:21	1
Toluene	<0.00198	U	0.00198		mg/Kg		02/03/21 19:53	02/05/21 09:21	1
Total BTEX	<0.00198	U	0.00198		mg/Kg		02/03/21 19:53	02/05/21 09:21	1
Xylenes, Total	<0.00198	U	0.00198		mg/Kg		02/03/21 19:53	02/05/21 09:21	1
m,p-Xylenes	<0.00397	U	0.00397		mg/Kg		02/03/21 19:53	02/05/21 09:21	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		02/03/21 19:53	02/05/21 09:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*101*		*70 - 130*	*02/03/21 19:53*	*02/05/21 09:21*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*02/03/21 19:53*	*02/05/21 09:21*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 22:04	1
Total TPH	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 22:04	1
>C10-C28	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 22:04	1
>C28-C35	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 22:04	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-130-1
SDG: TE012921008

Client Sample ID: BH02

Date Collected: 02/03/21 10:56
Date Received: 02/03/21 14:20

Lab Sample ID: 890-130-2

Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 135	02/06/21 15:46	02/09/21 22:04	1
o-Terphenyl	101		70 - 135	02/06/21 15:46	02/09/21 22:04	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.6		9.98		mg/Kg			02/03/21 21:34	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-130-1
SDG: TE012921008

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		DFBZ1	BFB1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-130-1	BH02	103	109
890-130-1 MS	BH02	98	100
890-130-1 MSD	BH02	94	97
890-130-2	BH02	101	104
LCS 890-134/2-A	Lab Control Sample	97	95
LCS 890-136/2-A	Lab Control Sample	97	97
LCSD 890-134/3-A	Lab Control Sample Dup	99	99
LCSD 890-136/3-A	Lab Control Sample Dup	94	96
MB 890-134/1-A	Method Blank	98	111
MB 890-136/1-A	Method Blank	102	103

Surrogate Legend

DFBZ = 1,4-Difluorobenzene
BFB = 4-Bromofluorobenzene (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	(70-135)	(70-135)
890-130-1	BH02	102	100
890-130-1 MS	BH02	117	106
890-130-1 MSD	BH02	119	108
890-130-2	BH02	104	101
LCS 890-186/2-A	Lab Control Sample	114	105
LCSD 890-186/3-A	Lab Control Sample Dup	110	100
MB 890-186/1-A	Method Blank	96	94

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-130-1
SDG: TE012921008

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 890-134/1-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 134

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*98*		*70 - 130*	*02/03/21 19:53*	*02/05/21 06:48*	*1*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*02/03/21 19:53*	*02/05/21 06:48*	*1*

Lab Sample ID: LCS 890-134/2-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 134

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09494		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.09299		mg/Kg		93	71 - 129		
Toluene			0.100	0.09355		mg/Kg		94	70 - 130		
m,p-Xylenes			0.200	0.1846		mg/Kg		92	70 - 135		
o-Xylene			0.100	0.09335		mg/Kg		93	71 - 133		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Difluorobenzene	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 890-134/3-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 134

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1002		mg/Kg		100	70 - 130	5	35
Ethylbenzene			0.100	0.09780		mg/Kg		98	71 - 129	5	35
Toluene			0.100	0.09930		mg/Kg		99	70 - 130	6	35
m,p-Xylenes			0.200	0.1894		mg/Kg		95	70 - 135	3	35
o-Xylene			0.100	0.09894		mg/Kg		99	71 - 133	6	35

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

Lab Sample ID: 890-130-1 MS
Matrix: Solid
Analysis Batch: 146

Client Sample ID: BH02
Prep Type: Total/NA
Prep Batch: 134

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00199	U	0.101	0.09884		mg/Kg		98	70 - 130		

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-130-1
SDG: TE012921008

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

Lab Sample ID: 890-130-1 MS — **Client Sample ID: BH02**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 146 — **Prep Batch: 134**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00199	U	0.101	0.09728		mg/Kg		96	71 - 129
Toluene	<0.00199	U	0.101	0.09699		mg/Kg		96	70 - 130
m,p-Xylenes	<0.00398	U	0.202	0.1928		mg/Kg		96	70 - 135
o-Xylene	<0.00199	U	0.101	0.09796		mg/Kg		97	71 - 133

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,4-Difluorobenzene	*98*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-130-1 MSD — **Client Sample ID: BH02**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 146 — **Prep Batch: 134**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0994	0.1059		mg/Kg		107	70 - 130	7	35
Ethylbenzene	<0.00199	U	0.0994	0.1043		mg/Kg		105	71 - 129	7	35
Toluene	<0.00199	U	0.0994	0.1027		mg/Kg		103	70 - 130	6	35
m,p-Xylenes	<0.00398	U	0.199	0.2050		mg/Kg		103	70 - 135	6	35
o-Xylene	<0.00199	U	0.0994	0.1040		mg/Kg		105	71 - 133	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,4-Difluorobenzene	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: MB 890-136/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 146 — **Prep Batch: 136**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/03/21 20:06	02/05/21 20:06	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/03/21 20:06	02/05/21 20:06	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/03/21 20:06	02/05/21 20:06	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		02/03/21 20:06	02/05/21 20:06	1
Xylenes, Total	<0.00200	U	0.00200	mg/Kg		02/03/21 20:06	02/05/21 20:06	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		02/03/21 20:06	02/05/21 20:06	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/03/21 20:06	02/05/21 20:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*102*		*70 - 130*	*02/03/21 20:06*	*02/05/21 20:06*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*02/03/21 20:06*	*02/05/21 20:06*	*1*

Lab Sample ID: LCS 890-136/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 146 — **Prep Batch: 136**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09769		mg/Kg		98	70 - 130
Ethylbenzene	0.100	0.09480		mg/Kg		95	71 - 129

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-130-1
SDG: TE012921008

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

Lab Sample ID: LCS 890-136/2-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 136

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Toluene			0.100	0.09539		mg/Kg		95	70 - 130		
m,p-Xylenes			0.200	0.1870		mg/Kg		94	70 - 135		
o-Xylene			0.100	0.09692		mg/Kg		97	71 - 133		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Difluorobenzene	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 890-136/3-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 136

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09775		mg/Kg		98	70 - 130	0	35
Ethylbenzene			0.100	0.09646		mg/Kg		96	71 - 129	2	35
Toluene			0.100	0.09628		mg/Kg		96	70 - 130	1	35
m,p-Xylenes			0.200	0.1919		mg/Kg		96	70 - 135	3	35
o-Xylene			0.100	0.09522		mg/Kg		95	71 - 133	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Difluorobenzene	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 890-186/1-A
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 186

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 19:43	1
Total TPH	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 19:43	1
>C10-C28	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 19:43	1
>C28-C35	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 19:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 135*	*02/06/21 15:46*	*02/09/21 19:43*	*1*
o-Terphenyl	*94*		*70 - 135*	*02/06/21 15:46*	*02/09/21 19:43*	*1*

Lab Sample ID: LCS 890-186/2-A
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 186

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C6-C10			1000	1044		mg/Kg		104	70 - 135		
>C10-C28			1000	1004		mg/Kg		100	70 - 135		

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-130-1
SDG: TE012921008

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

Lab Sample ID: LCS 890-186/2-A
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 186

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	114		70 - 135
o-Terphenyl	105		70 - 135

Lab Sample ID: LCSD 890-186/3-A
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 186

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10			1000	1052		mg/Kg		105	70 - 135	1	25
>C10-C28			1000	1044		mg/Kg		104	70 - 135	4	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	110		70 - 135
o-Terphenyl	100		70 - 135

Lab Sample ID: 890-130-1 MS
Matrix: Solid
Analysis Batch: 215

Client Sample ID: BH02
Prep Type: Total/NA
Prep Batch: 186

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
C6-C10	<50.3	U	997	1090		mg/Kg		109	70 - 135
Total TPH	<50.3	U	1990	2154		mg/Kg		0	
>C10-C28	<50.3	U	997	1064		mg/Kg		107	70 - 135

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	117		70 - 135
o-Terphenyl	106		70 - 135

Lab Sample ID: 890-130-1 MSD
Matrix: Solid
Analysis Batch: 215

Client Sample ID: BH02
Prep Type: Total/NA
Prep Batch: 186

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10	<50.3	U	1000	1054		mg/Kg		105	70 - 135	3	35
Total TPH	<50.3	U	2000	2108		mg/Kg		0		NC	
>C10-C28	<50.3	U	1000	1054		mg/Kg		105	70 - 135	1	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	119		70 - 135
o-Terphenyl	108		70 - 135

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-130-1
SDG: TE012921008

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 890-133/1-A
Matrix: Solid
Analysis Batch: 137

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			02/03/21 20:49	1

Lab Sample ID: LCS 890-133/2-A
Matrix: Solid
Analysis Batch: 137

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			500	496.2		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 890-133/3-A
Matrix: Solid
Analysis Batch: 137

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			500	493.5		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-134-A-1-B MS
Matrix: Solid
Analysis Batch: 137

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	82.2		500	588.7		mg/Kg		101	90 - 110		

Lab Sample ID: 890-134-A-1-C MSD
Matrix: Solid
Analysis Batch: 137

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	82.2		499	551.1		mg/Kg		94	90 - 110	7	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-130-1
SDG: TE012921008

GC VOA

Prep Batch: 134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-130-1	BH02	Total/NA	Solid	5030C	
890-130-2	BH02	Total/NA	Solid	5030C	
MB 890-134/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 890-134/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 890-134/3-A	Lab Control Sample Dup	Total/NA	Solid	5030C	
890-130-1 MS	BH02	Total/NA	Solid	5030C	
890-130-1 MSD	BH02	Total/NA	Solid	5030C	

Prep Batch: 136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 890-136/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 890-136/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 890-136/3-A	Lab Control Sample Dup	Total/NA	Solid	5030C	

Analysis Batch: 146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-130-1	BH02	Total/NA	Solid	8021B	134
890-130-2	BH02	Total/NA	Solid	8021B	134
MB 890-134/1-A	Method Blank	Total/NA	Solid	8021B	134
MB 890-136/1-A	Method Blank	Total/NA	Solid	8021B	136
LCS 890-134/2-A	Lab Control Sample	Total/NA	Solid	8021B	134
LCS 890-136/2-A	Lab Control Sample	Total/NA	Solid	8021B	136
LCSD 890-134/3-A	Lab Control Sample Dup	Total/NA	Solid	8021B	134
LCSD 890-136/3-A	Lab Control Sample Dup	Total/NA	Solid	8021B	136
890-130-1 MS	BH02	Total/NA	Solid	8021B	134
890-130-1 MSD	BH02	Total/NA	Solid	8021B	134

GC Semi VOA

Prep Batch: 186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-130-1	BH02	Total/NA	Solid	8015NM Prep	
890-130-2	BH02	Total/NA	Solid	8015NM Prep	
MB 890-186/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 890-186/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 890-186/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-130-1 MS	BH02	Total/NA	Solid	8015NM Prep	
890-130-1 MSD	BH02	Total/NA	Solid	8015NM Prep	

Analysis Batch: 215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-130-1	BH02	Total/NA	Solid	8015B NM	186
890-130-2	BH02	Total/NA	Solid	8015B NM	186
MB 890-186/1-A	Method Blank	Total/NA	Solid	8015B NM	186
LCS 890-186/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	186
LCSD 890-186/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	186
890-130-1 MS	BH02	Total/NA	Solid	8015B NM	186
890-130-1 MSD	BH02	Total/NA	Solid	8015B NM	186

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-130-1
SDG: TE012921008

HPLC/IC

Leach Batch: 133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-130-1	BH02	Soluble	Solid	DI Leach	
890-130-2	BH02	Soluble	Solid	DI Leach	
MB 890-133/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 890-133/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 890-133/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-134-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-134-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-130-1	BH02	Soluble	Solid	300.0	133
890-130-2	BH02	Soluble	Solid	300.0	133
MB 890-133/1-A	Method Blank	Soluble	Solid	300.0	133
LCS 890-133/2-A	Lab Control Sample	Soluble	Solid	300.0	133
LCSD 890-133/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	133
890-134-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	133
890-134-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	133

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-130-1
SDG: TE012921008

Client Sample ID: BH02
Date Collected: 02/03/21 10:53
Date Received: 02/03/21 14:20

Lab Sample ID: 890-130-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			134	02/03/21 19:53	MC	XC
Total/NA	Analysis	8021B		1	146	02/05/21 08:01	PXS	XC
Total/NA	Prep	8015NM Prep			186	02/06/21 15:46	MC	XC
Total/NA	Analysis	8015B NM		1	215	02/09/21 20:44	BJH	XC
Soluble	Leach	DI Leach			133	02/03/21 17:27	MC	XC
Soluble	Analysis	300.0		1	137	02/03/21 21:28	MC	XC

Client Sample ID: BH02
Date Collected: 02/03/21 10:56
Date Received: 02/03/21 14:20

Lab Sample ID: 890-130-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			134	02/03/21 19:53	MC	XC
Total/NA	Analysis	8021B		1	146	02/05/21 09:21	PXS	XC
Total/NA	Prep	8015NM Prep			186	02/06/21 15:46	MC	XC
Total/NA	Analysis	8015B NM		1	215	02/09/21 22:04	BJH	XC
Soluble	Leach	DI Leach			133	02/03/21 17:27	MC	XC
Soluble	Analysis	300.0		1	137	02/03/21 21:34	MC	XC

Laboratory References:

XC = Eurofins Xenco, Carlsbad, 1089 N Canal St., Carlsbad, NM 88220, TEL (575)988-3199

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-130-1
SDG: TE012921008

Laboratory: Eurofins Xenco, Carlsbad

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

Authority	Program	Identification Number	Expiration Date
Louisiana	NELAP	05092	06-30-21

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5030C	Solid	Total BTEX

Method Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-130-1
SDG: TE012921008

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XC
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XC
300.0	Anions, Ion Chromatography	MCAWW	XC
5030C	Purge and Trap	SW846	XC
8015NM Prep	Microextraction	SW846	XC
DI Leach	Deionized Water Leaching Procedure	ASTM	XC

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

XC = Eurofins Xenco, Carlsbad, 1089 N Canal St., Carlsbad, NM 88220, TEL (575)988-3199

Sample Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-130-1
SDG: TE012921008

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
890-130-1	BH02	Solid	02/03/21 10:53	02/03/21 14:20	
890-130-2	BH02	Solid	02/03/21 10:56	02/03/21 14:20	

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 Crasbad, 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

Project Manager:	Joseph Hernandez	Bill to: (If different)	Kyle Littrell
Company Name:	WSP, Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(281)702-2329	Email:	

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 199	Turn Around	
Project Number:	TE012921008	Routine	☒
Project Location	Eddy county	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	1.0/2.8	Thermometer ID	
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	
Sample Custody Seals:	Yes No N/A	Total Containers:	2

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	BH02	S	2/3/21	1053	2'	1		X	X	X
	BH02	S	2/3/21	1056	4'	1		X	X	X

ANALYSIS REQUEST

Preservative Codes

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

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

Sample Comments

890-130 Chain of Custody

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		02-03-21	2		
3			4		
5			6		

Revised Date 022619 Rev 2019.1

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 Crasibad, 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: _____

www.xenco.com Page 1 of 1

Project Manager:	Joseph Hernandez	Bill to: (if different)	Kyle Littrell
Company Name:	WSP, Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(281)702-2329	Email:	

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 199	Turn Around	
Project Number:	TF0129210008	Routine	☒
Project Location	Eddy county	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	1.0/0.8	Thermometer ID	
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	
Sample Custody Seals:	Yes No N/A	Total Containers:	2

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	BH02	S	2/3/21	1053	2'	1		X	X	X
	BH02	S	2/3/21	1056	4'	1		X	X	X

ANALYSIS REQUEST

Preservative Codes

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

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

Sample Comments

890-130 Chain of Custody

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

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

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		02-03-21 1420			
3			4		
5			6		

Revised Date 022619 Rev 2019.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-130-1
SDG Number: TE012921008

Login Number: 130
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").	True	

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-131-1
Laboratory Sample Delivery Group: TE012921008
Client Project/Site: PLU 199
Revision: 1

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

Attn: Dan Moir

Authorized for release by:
2/11/2021 9:45:15 AM

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

Client: WSP USA Inc.
Project/Site: PLU 199

Laboratory Job ID: 890-131-1
SDG: TE012921008

Table of Contents

Definitions/Glossary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-131-1
SDG: TE012921008

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-131-1
SDG: TE012921008

Job ID: 890-131-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-131-1

REVISION

The report being provided is a revision of the original report sent on 2/10/2021. The report (revision 1) is being revised due to Corrected certificate summary page for TPH 8015.

Report revision history

Receipt
The samples were received on 2/3/2021 2:20 PM; 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
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-131-1
SDG: TE012921008

Client Sample ID: BH03
Date Collected: 02/03/21 10:35
Date Received: 02/03/21 14:20

Lab Sample ID: 890-131-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 09:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 09:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 09:44	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 09:44	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 09:44	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/03/21 19:53	02/05/21 09:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 09:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*93*		*70 - 130*	*02/03/21 19:53*	*02/05/21 09:44*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*02/03/21 19:53*	*02/05/21 09:44*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<50.2	U	50.2		mg/Kg		02/06/21 15:46	02/09/21 22:25	1
Total TPH	<50.2	U	50.2		mg/Kg		02/06/21 15:46	02/09/21 22:25	1
>C10-C28	<50.2	U	50.2		mg/Kg		02/06/21 15:46	02/09/21 22:25	1
>C28-C35	<50.2	U	50.2		mg/Kg		02/06/21 15:46	02/09/21 22:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 135*	*02/06/21 15:46*	*02/09/21 22:25*	*1*
o-Terphenyl	*98*		*70 - 135*	*02/06/21 15:46*	*02/09/21 22:25*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**25.9**		9.98		mg/Kg			02/03/21 21:40	1

Client Sample ID: BH03
Date Collected: 02/03/21 10:41
Date Received: 02/03/21 14:20

Lab Sample ID: 890-131-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 10:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 10:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 10:06	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 10:06	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 10:06	1
m,p-Xylenes	<0.00401	U	0.00401		mg/Kg		02/03/21 19:53	02/05/21 10:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 10:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*100*		*70 - 130*	*02/03/21 19:53*	*02/05/21 10:06*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*02/03/21 19:53*	*02/05/21 10:06*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<49.8	U	49.8		mg/Kg		02/06/21 15:46	02/09/21 22:45	1
Total TPH	<49.8	U	49.8		mg/Kg		02/06/21 15:46	02/09/21 22:45	1
>C10-C28	<49.8	U	49.8		mg/Kg		02/06/21 15:46	02/09/21 22:45	1
>C28-C35	<49.8	U	49.8		mg/Kg		02/06/21 15:46	02/09/21 22:45	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-131-1
SDG: TE012921008

Client Sample ID: BH03
Date Collected: 02/03/21 10:41
Date Received: 02/03/21 14:20

Lab Sample ID: 890-131-2
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 135*	*02/06/21 15:46*	*02/09/21 22:45*	*1*
o-Terphenyl	*99*		*70 - 135*	*02/06/21 15:46*	*02/09/21 22:45*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	70.7		9.96		mg/Kg			02/03/21 21:57	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-131-1
SDG: TE012921008

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		DFBZ1	BFB1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-130-A-1-C MS	Matrix Spike	98	100
890-130-A-1-D MSD	Matrix Spike Duplicate	94	97
890-131-1	BH03	93	100
890-131-2	BH03	100	104
LCS 890-134/2-A	Lab Control Sample	97	95
LCS 890-136/2-A	Lab Control Sample	97	97
LCSD 890-134/3-A	Lab Control Sample Dup	99	99
LCSD 890-136/3-A	Lab Control Sample Dup	94	96
MB 890-134/1-A	Method Blank	98	111
MB 890-136/1-A	Method Blank	102	103

Surrogate Legend

DFBZ = 1,4-Difluorobenzene
BFB = 4-Bromofluorobenzene (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	(70-135)	(70-135)
890-130-A-1-F MS	Matrix Spike	117	106
890-130-A-1-G MSD	Matrix Spike Duplicate	119	108
890-131-1	BH03	100	98
890-131-2	BH03	101	99
LCS 890-186/2-A	Lab Control Sample	114	105
LCSD 890-186/3-A	Lab Control Sample Dup	110	100
MB 890-186/1-A	Method Blank	96	94

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-131-1
SDG: TE012921008

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 890-134/1-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 134

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*98*		*70 - 130*	*02/03/21 19:53*	*02/05/21 06:48*	*1*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*02/03/21 19:53*	*02/05/21 06:48*	*1*

Lab Sample ID: LCS 890-134/2-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 134

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09494		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.09299		mg/Kg		93	71 - 129		
Toluene			0.100	0.09355		mg/Kg		94	70 - 130		
m,p-Xylenes			0.200	0.1846		mg/Kg		92	70 - 135		
o-Xylene			0.100	0.09335		mg/Kg		93	71 - 133		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Difluorobenzene	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 890-134/3-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 134

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1002		mg/Kg		100	70 - 130	5	35
Ethylbenzene			0.100	0.09780		mg/Kg		98	71 - 129	5	35
Toluene			0.100	0.09930		mg/Kg		99	70 - 130	6	35
m,p-Xylenes			0.200	0.1894		mg/Kg		95	70 - 135	3	35
o-Xylene			0.100	0.09894		mg/Kg		99	71 - 133	6	35

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

Lab Sample ID: 890-130-A-1-C MS
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 134

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00199	U	0.101	0.09884		mg/Kg		98	70 - 130		

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-131-1
SDG: TE012921008

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

Lab Sample ID: 890-130-A-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 146 — **Prep Batch: 134**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00199	U	0.101	0.09728		mg/Kg		96	71 - 129
Toluene	<0.00199	U	0.101	0.09699		mg/Kg		96	70 - 130
m,p-Xylenes	<0.00398	U	0.202	0.1928		mg/Kg		96	70 - 135
o-Xylene	<0.00199	U	0.101	0.09796		mg/Kg		97	71 - 133

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,4-Difluorobenzene	*98*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-130-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 146 — **Prep Batch: 134**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0994	0.1059		mg/Kg		107	70 - 130	7	35
Ethylbenzene	<0.00199	U	0.0994	0.1043		mg/Kg		105	71 - 129	7	35
Toluene	<0.00199	U	0.0994	0.1027		mg/Kg		103	70 - 130	6	35
m,p-Xylenes	<0.00398	U	0.199	0.2050		mg/Kg		103	70 - 135	6	35
o-Xylene	<0.00199	U	0.0994	0.1040		mg/Kg		105	71 - 133	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,4-Difluorobenzene	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: MB 890-136/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 146 — **Prep Batch: 136**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/03/21 20:06	02/05/21 20:06	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/03/21 20:06	02/05/21 20:06	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/03/21 20:06	02/05/21 20:06	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		02/03/21 20:06	02/05/21 20:06	1
Xylenes, Total	<0.00200	U	0.00200	mg/Kg		02/03/21 20:06	02/05/21 20:06	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		02/03/21 20:06	02/05/21 20:06	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/03/21 20:06	02/05/21 20:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*102*		*70 - 130*	*02/03/21 20:06*	*02/05/21 20:06*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*02/03/21 20:06*	*02/05/21 20:06*	*1*

Lab Sample ID: LCS 890-136/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 146 — **Prep Batch: 136**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09769		mg/Kg		98	70 - 130
Ethylbenzene	0.100	0.09480		mg/Kg		95	71 - 129

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-131-1
SDG: TE012921008

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

Lab Sample ID: LCS 890-136/2-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 136

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Toluene			0.100	0.09539		mg/Kg		95	70 - 130		
m,p-Xylenes			0.200	0.1870		mg/Kg		94	70 - 135		
o-Xylene			0.100	0.09692		mg/Kg		97	71 - 133		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Difluorobenzene	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 890-136/3-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 136

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09775		mg/Kg		98	70 - 130	0	35
Ethylbenzene			0.100	0.09646		mg/Kg		96	71 - 129	2	35
Toluene			0.100	0.09628		mg/Kg		96	70 - 130	1	35
m,p-Xylenes			0.200	0.1919		mg/Kg		96	70 - 135	3	35
o-Xylene			0.100	0.09522		mg/Kg		95	71 - 133	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Difluorobenzene	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 890-186/1-A
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 186

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 19:43	1
Total TPH	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 19:43	1
>C10-C28	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 19:43	1
>C28-C35	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 19:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 135*	*02/06/21 15:46*	*02/09/21 19:43*	*1*
o-Terphenyl	*94*		*70 - 135*	*02/06/21 15:46*	*02/09/21 19:43*	*1*

Lab Sample ID: LCS 890-186/2-A
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 186

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C6-C10			1000	1044		mg/Kg		104	70 - 135		
>C10-C28			1000	1004		mg/Kg		100	70 - 135		

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-131-1
SDG: TE012921008

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

Lab Sample ID: LCS 890-186/2-A
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 186

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	114		70 - 135
o-Terphenyl	105		70 - 135

Lab Sample ID: LCSD 890-186/3-A
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 186

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10			1000	1052		mg/Kg		105	70 - 135	1	25
>C10-C28			1000	1044		mg/Kg		104	70 - 135	4	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	110		70 - 135
o-Terphenyl	100		70 - 135

Lab Sample ID: 890-130-A-1-F MS
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 186

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
C6-C10	<50.3	U	997	1090		mg/Kg		109	70 - 135
Total TPH	<50.3	U	1990	2154		mg/Kg		0	
>C10-C28	<50.3	U	997	1064		mg/Kg		107	70 - 135

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	117		70 - 135
o-Terphenyl	106		70 - 135

Lab Sample ID: 890-130-A-1-G MSD
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 186

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10	<50.3	U	1000	1054		mg/Kg		105	70 - 135	3	35
Total TPH	<50.3	U	2000	2108		mg/Kg		0		NC	
>C10-C28	<50.3	U	1000	1054		mg/Kg		105	70 - 135	1	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	119		70 - 135
o-Terphenyl	108		70 - 135

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-131-1
SDG: TE012921008

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 890-133/1-A
Matrix: Solid
Analysis Batch: 137

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			02/03/21 20:49	1

Lab Sample ID: LCS 890-133/2-A
Matrix: Solid
Analysis Batch: 137

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			500	496.2		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 890-133/3-A
Matrix: Solid
Analysis Batch: 137

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			500	493.5		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-134-A-1-B MS
Matrix: Solid
Analysis Batch: 137

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	82.2		500	588.7		mg/Kg		101	90 - 110		

Lab Sample ID: 890-134-A-1-C MSD
Matrix: Solid
Analysis Batch: 137

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	82.2		499	551.1		mg/Kg		94	90 - 110	7	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-131-1
SDG: TE012921008

GC VOA

Prep Batch: 134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-131-1	BH03	Total/NA	Solid	5030C	
890-131-2	BH03	Total/NA	Solid	5030C	
MB 890-134/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 890-134/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 890-134/3-A	Lab Control Sample Dup	Total/NA	Solid	5030C	
890-130-A-1-C MS	Matrix Spike	Total/NA	Solid	5030C	
890-130-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5030C	

Prep Batch: 136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 890-136/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 890-136/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 890-136/3-A	Lab Control Sample Dup	Total/NA	Solid	5030C	

Analysis Batch: 146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-131-1	BH03	Total/NA	Solid	8021B	134
890-131-2	BH03	Total/NA	Solid	8021B	134
MB 890-134/1-A	Method Blank	Total/NA	Solid	8021B	134
MB 890-136/1-A	Method Blank	Total/NA	Solid	8021B	136
LCS 890-134/2-A	Lab Control Sample	Total/NA	Solid	8021B	134
LCS 890-136/2-A	Lab Control Sample	Total/NA	Solid	8021B	136
LCSD 890-134/3-A	Lab Control Sample Dup	Total/NA	Solid	8021B	134
LCSD 890-136/3-A	Lab Control Sample Dup	Total/NA	Solid	8021B	136
890-130-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	134
890-130-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	134

GC Semi VOA

Prep Batch: 186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-131-1	BH03	Total/NA	Solid	8015NM Prep	
890-131-2	BH03	Total/NA	Solid	8015NM Prep	
MB 890-186/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 890-186/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 890-186/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-130-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-130-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-131-1	BH03	Total/NA	Solid	8015B NM	186
890-131-2	BH03	Total/NA	Solid	8015B NM	186
MB 890-186/1-A	Method Blank	Total/NA	Solid	8015B NM	186
LCS 890-186/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	186
LCSD 890-186/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	186
890-130-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	186
890-130-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	186

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-131-1
SDG: TE012921008

HPLC/IC

Leach Batch: 133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-131-1	BH03	Soluble	Solid	DI Leach	
890-131-2	BH03	Soluble	Solid	DI Leach	
MB 890-133/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 890-133/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 890-133/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-134-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-134-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-131-1	BH03	Soluble	Solid	300.0	133
890-131-2	BH03	Soluble	Solid	300.0	133
MB 890-133/1-A	Method Blank	Soluble	Solid	300.0	133
LCS 890-133/2-A	Lab Control Sample	Soluble	Solid	300.0	133
LCSD 890-133/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	133
890-134-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	133
890-134-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	133

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-131-1
SDG: TE012921008

Client Sample ID: BH03
Date Collected: 02/03/21 10:35
Date Received: 02/03/21 14:20

Lab Sample ID: 890-131-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			134	02/03/21 19:53	MC	XC
Total/NA	Analysis	8021B		1	146	02/05/21 09:44	PXS	XC
Total/NA	Prep	8015NM Prep			186	02/06/21 15:46	MC	XC
Total/NA	Analysis	8015B NM		1	215	02/09/21 22:25	BJH	XC
Soluble	Leach	DI Leach			133	02/03/21 17:27	MC	XC
Soluble	Analysis	300.0		1	137	02/03/21 21:40	MC	XC

Client Sample ID: BH03
Date Collected: 02/03/21 10:41
Date Received: 02/03/21 14:20

Lab Sample ID: 890-131-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			134	02/03/21 19:53	MC	XC
Total/NA	Analysis	8021B		1	146	02/05/21 10:06	PXS	XC
Total/NA	Prep	8015NM Prep			186	02/06/21 15:46	MC	XC
Total/NA	Analysis	8015B NM		1	215	02/09/21 22:45	BJH	XC
Soluble	Leach	DI Leach			133	02/03/21 17:27	MC	XC
Soluble	Analysis	300.0		1	137	02/03/21 21:57	MC	XC

Laboratory References:

XC = Eurofins Xenco, Carlsbad, 1089 N Canal St., Carlsbad, NM 88220, TEL (575)988-3199

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-131-1
SDG: TE012921008

Laboratory: Eurofins Xenco, Carlsbad

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

Authority	Program	Identification Number	Expiration Date
Louisiana	NELAP	05092	06-30-21

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5030C	Solid	Total BTEX

Method Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-131-1
SDG: TE012921008

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XC
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XC
300.0	Anions, Ion Chromatography	MCAWW	XC
5030C	Purge and Trap	SW846	XC
8015NM Prep	Microextraction	SW846	XC
DI Leach	Deionized Water Leaching Procedure	ASTM	XC

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

XC = Eurofins Xenco, Carlsbad, 1089 N Canal St., Carlsbad, NM 88220, TEL (575)988-3199

Sample Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-131-1
SDG: TE012921008

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
890-131-1	BH03	Solid	02/03/21 10:35	02/03/21 14:20	
890-131-2	BH03	Solid	02/03/21 10:41	02/03/21 14:20	

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 Crasbad, 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: _____

www.xenco.com Page 1 of 1

Project Manager:	Joseph Hernandez	Bill to: (if different)	Kyle Littrell
Company Name:	WSP Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(281) 702-2329	Email:	

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 199	Turn Around	
Project Number:	TE012921008	Routine	☒
Project Location	Eddy county	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	1.0	Thermometer ID	TM607
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	
Sample Custody Seals:	Yes No N/A	Total Containers:	2

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	BH03	S	2/3/21	1035	2'	1		X	X	X
	BH03	S	2/3/21	1041	4'	1		X	X	X

ANALYSIS REQUEST

Preservative Codes

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

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

Sample Comments

890-131 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U 1631 / 245.1 / 7470 / 7471 : Hg

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			02.03.21 1420			
3				4		
5				6		

Revised Date 022619 Rev. 2019 1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-131-1
SDG Number: TE012921008

Login Number: 131
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").	True	

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-132-1
Laboratory Sample Delivery Group: TE012921008
Client Project/Site: PLU 199
Revision: 1

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

Attn: Dan Moir

JKramer

Authorized for release by:
2/11/2021 9:53:55 AM

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 199

Laboratory Job ID: 890-132-1
SDG: TE012921008

Table of Contents

Definitions/Glossary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-132-1
SDG: TE012921008

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-132-1
SDG: TE012921008

Job ID: 890-132-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-132-1

REVISION

The report being provided is a revision of the original report sent on 2/10/2021. The report (revision 1) is being revised due to Corrected certificate summary page for TPH 8015.

Report revision history

Receipt
The samples were received on 2/3/2021 3:45 PM; 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
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-132-1
SDG: TE012921008

Client Sample ID: BH04
Date Collected: 02/03/21 11:52
Date Received: 02/03/21 15:45

Lab Sample ID: 890-132-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/05/21 10:29	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/05/21 10:29	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/05/21 10:29	1
Total BTEX	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/05/21 10:29	1
Xylenes, Total	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/05/21 10:29	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		02/03/21 19:53	02/05/21 10:29	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/05/21 10:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*106*		*70 - 130*	*02/03/21 19:53*	*02/05/21 10:29*	*1*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*02/03/21 19:53*	*02/05/21 10:29*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<49.9	U	49.9		mg/Kg		02/06/21 15:46	02/09/21 23:25	1
Total TPH	<49.9	U	49.9		mg/Kg		02/06/21 15:46	02/09/21 23:25	1
>C10-C28	<49.9	U	49.9		mg/Kg		02/06/21 15:46	02/09/21 23:25	1
>C28-C35	<49.9	U	49.9		mg/Kg		02/06/21 15:46	02/09/21 23:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 135*	*02/06/21 15:46*	*02/09/21 23:25*	*1*
o-Terphenyl	*94*		*70 - 135*	*02/06/21 15:46*	*02/09/21 23:25*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.5**		10.0		mg/Kg			02/03/21 22:02	1

Client Sample ID: BH04
Date Collected: 02/03/21 11:57
Date Received: 02/03/21 15:45

Lab Sample ID: 890-132-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/03/21 19:53	02/05/21 11:14	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/03/21 19:53	02/05/21 11:14	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/03/21 19:53	02/05/21 11:14	1
Total BTEX	<0.00201	U	0.00201		mg/Kg		02/03/21 19:53	02/05/21 11:14	1
Xylenes, Total	<0.00201	U	0.00201		mg/Kg		02/03/21 19:53	02/05/21 11:14	1
m,p-Xylenes	<0.00402	U	0.00402		mg/Kg		02/03/21 19:53	02/05/21 11:14	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/03/21 19:53	02/05/21 11:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*100*		*70 - 130*	*02/03/21 19:53*	*02/05/21 11:14*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*02/03/21 19:53*	*02/05/21 11:14*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<49.9	U	49.9		mg/Kg		02/06/21 15:46	02/09/21 23:45	1
Total TPH	<49.9	U	49.9		mg/Kg		02/06/21 15:46	02/09/21 23:45	1
>C10-C28	<49.9	U	49.9		mg/Kg		02/06/21 15:46	02/09/21 23:45	1
>C28-C35	<49.9	U	49.9		mg/Kg		02/06/21 15:46	02/09/21 23:45	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-132-1
SDG: TE012921008

Client Sample ID: BH04
Date Collected: 02/03/21 11:57
Date Received: 02/03/21 15:45

Lab Sample ID: 890-132-2
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 135*	*02/06/21 15:46*	*02/09/21 23:45*	*1*
o-Terphenyl	*105*		*70 - 135*	*02/06/21 15:46*	*02/09/21 23:45*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13.3		9.98		mg/Kg			02/03/21 22:08	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-132-1
SDG: TE012921008

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		DFBZ1	BFB1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-130-A-1-C MS	Matrix Spike	98	100
890-130-A-1-D MSD	Matrix Spike Duplicate	94	97
890-132-1	BH04	106	108
890-132-2	BH04	100	103
LCS 890-134/2-A	Lab Control Sample	97	95
LCS 890-136/2-A	Lab Control Sample	97	97
LCSD 890-134/3-A	Lab Control Sample Dup	99	99
LCSD 890-136/3-A	Lab Control Sample Dup	94	96
MB 890-134/1-A	Method Blank	98	111
MB 890-136/1-A	Method Blank	102	103

Surrogate Legend

DFBZ = 1,4-Difluorobenzene
BFB = 4-Bromofluorobenzene (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	(70-135)	(70-135)
890-130-A-1-F MS	Matrix Spike	117	106
890-130-A-1-G MSD	Matrix Spike Duplicate	119	108
890-132-1	BH04	96	94
890-132-2	BH04	106	105
LCS 890-186/2-A	Lab Control Sample	114	105
LCSD 890-186/3-A	Lab Control Sample Dup	110	100
MB 890-186/1-A	Method Blank	96	94

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-132-1
SDG: TE012921008

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 890-134/1-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 134

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*98*		*70 - 130*	*02/03/21 19:53*	*02/05/21 06:48*	*1*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*02/03/21 19:53*	*02/05/21 06:48*	*1*

Lab Sample ID: LCS 890-134/2-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 134

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09494		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.09299		mg/Kg		93	71 - 129		
Toluene			0.100	0.09355		mg/Kg		94	70 - 130		
m,p-Xylenes			0.200	0.1846		mg/Kg		92	70 - 135		
o-Xylene			0.100	0.09335		mg/Kg		93	71 - 133		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Difluorobenzene	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 890-134/3-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 134

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1002		mg/Kg		100	70 - 130	5	35
Ethylbenzene			0.100	0.09780		mg/Kg		98	71 - 129	5	35
Toluene			0.100	0.09930		mg/Kg		99	70 - 130	6	35
m,p-Xylenes			0.200	0.1894		mg/Kg		95	70 - 135	3	35
o-Xylene			0.100	0.09894		mg/Kg		99	71 - 133	6	35

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

Lab Sample ID: 890-130-A-1-C MS
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 134

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00199	U	0.101	0.09884		mg/Kg		98	70 - 130		

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-132-1
SDG: TE012921008

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

Lab Sample ID: 890-130-A-1-C MS
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 134

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00199	U	0.101	0.09728		mg/Kg		96	71 - 129
Toluene	<0.00199	U	0.101	0.09699		mg/Kg		96	70 - 130
m,p-Xylenes	<0.00398	U	0.202	0.1928		mg/Kg		96	70 - 135
o-Xylene	<0.00199	U	0.101	0.09796		mg/Kg		97	71 - 133

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,4-Difluorobenzene	*98*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-130-A-1-D MSD
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 134

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0994	0.1059		mg/Kg		107	70 - 130	7	35
Ethylbenzene	<0.00199	U	0.0994	0.1043		mg/Kg		105	71 - 129	7	35
Toluene	<0.00199	U	0.0994	0.1027		mg/Kg		103	70 - 130	6	35
m,p-Xylenes	<0.00398	U	0.199	0.2050		mg/Kg		103	70 - 135	6	35
o-Xylene	<0.00199	U	0.0994	0.1040		mg/Kg		105	71 - 133	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,4-Difluorobenzene	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: MB 890-136/1-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 136

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/21 20:06	02/05/21 20:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/21 20:06	02/05/21 20:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/21 20:06	02/05/21 20:06	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		02/03/21 20:06	02/05/21 20:06	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg		02/03/21 20:06	02/05/21 20:06	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/03/21 20:06	02/05/21 20:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/21 20:06	02/05/21 20:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*102*		*70 - 130*	*02/03/21 20:06*	*02/05/21 20:06*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*02/03/21 20:06*	*02/05/21 20:06*	*1*

Lab Sample ID: LCS 890-136/2-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 136

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene			0.100	0.09769		mg/Kg		98	70 - 130
Ethylbenzene			0.100	0.09480		mg/Kg		95	71 - 129

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-132-1
SDG: TE012921008

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

Lab Sample ID: LCS 890-136/2-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 136

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Toluene			0.100	0.09539		mg/Kg		95	70 - 130		
m,p-Xylenes			0.200	0.1870		mg/Kg		94	70 - 135		
o-Xylene			0.100	0.09692		mg/Kg		97	71 - 133		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Difluorobenzene	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 890-136/3-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 136

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09775		mg/Kg		98	70 - 130	0	35
Ethylbenzene			0.100	0.09646		mg/Kg		96	71 - 129	2	35
Toluene			0.100	0.09628		mg/Kg		96	70 - 130	1	35
m,p-Xylenes			0.200	0.1919		mg/Kg		96	70 - 135	3	35
o-Xylene			0.100	0.09522		mg/Kg		95	71 - 133	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Difluorobenzene	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 890-186/1-A
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 186

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 19:43	1
Total TPH	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 19:43	1
>C10-C28	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 19:43	1
>C28-C35	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 19:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 135*	*02/06/21 15:46*	*02/09/21 19:43*	*1*
o-Terphenyl	*94*		*70 - 135*	*02/06/21 15:46*	*02/09/21 19:43*	*1*

Lab Sample ID: LCS 890-186/2-A
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 186

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C6-C10			1000	1044		mg/Kg		104	70 - 135		
>C10-C28			1000	1004		mg/Kg		100	70 - 135		

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-132-1
SDG: TE012921008

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

Lab Sample ID: LCS 890-186/2-A
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 186

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	114		70 - 135
o-Terphenyl	105		70 - 135

Lab Sample ID: LCSD 890-186/3-A
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 186

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10			1000	1052		mg/Kg		105	70 - 135	1	25
>C10-C28			1000	1044		mg/Kg		104	70 - 135	4	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	110		70 - 135
o-Terphenyl	100		70 - 135

Lab Sample ID: 890-130-A-1-F MS
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 186

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
C6-C10	<50.3	U	997	1090		mg/Kg		109	70 - 135
Total TPH	<50.3	U	1990	2154		mg/Kg		0	
>C10-C28	<50.3	U	997	1064		mg/Kg		107	70 - 135

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	117		70 - 135
o-Terphenyl	106		70 - 135

Lab Sample ID: 890-130-A-1-G MSD
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 186

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10	<50.3	U	1000	1054		mg/Kg		105	70 - 135	3	35
Total TPH	<50.3	U	2000	2108		mg/Kg		0		NC	
>C10-C28	<50.3	U	1000	1054		mg/Kg		105	70 - 135	1	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	119		70 - 135
o-Terphenyl	108		70 - 135

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-132-1
SDG: TE012921008

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 890-133/1-A
Matrix: Solid
Analysis Batch: 137

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			02/03/21 20:49	1

Lab Sample ID: LCS 890-133/2-A
Matrix: Solid
Analysis Batch: 137

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			500	496.2		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 890-133/3-A
Matrix: Solid
Analysis Batch: 137

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			500	493.5		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-134-A-1-B MS
Matrix: Solid
Analysis Batch: 137

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	82.2		500	588.7		mg/Kg		101	90 - 110		

Lab Sample ID: 890-134-A-1-C MSD
Matrix: Solid
Analysis Batch: 137

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	82.2		499	551.1		mg/Kg		94	90 - 110	7	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-132-1
SDG: TE012921008

GC VOA

Prep Batch: 134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-132-1	BH04	Total/NA	Solid	5030C	
890-132-2	BH04	Total/NA	Solid	5030C	
MB 890-134/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 890-134/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 890-134/3-A	Lab Control Sample Dup	Total/NA	Solid	5030C	
890-130-A-1-C MS	Matrix Spike	Total/NA	Solid	5030C	
890-130-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5030C	

Prep Batch: 136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 890-136/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 890-136/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 890-136/3-A	Lab Control Sample Dup	Total/NA	Solid	5030C	

Analysis Batch: 146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-132-1	BH04	Total/NA	Solid	8021B	134
890-132-2	BH04	Total/NA	Solid	8021B	134
MB 890-134/1-A	Method Blank	Total/NA	Solid	8021B	134
MB 890-136/1-A	Method Blank	Total/NA	Solid	8021B	136
LCS 890-134/2-A	Lab Control Sample	Total/NA	Solid	8021B	134
LCS 890-136/2-A	Lab Control Sample	Total/NA	Solid	8021B	136
LCSD 890-134/3-A	Lab Control Sample Dup	Total/NA	Solid	8021B	134
LCSD 890-136/3-A	Lab Control Sample Dup	Total/NA	Solid	8021B	136
890-130-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	134
890-130-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	134

GC Semi VOA

Prep Batch: 186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-132-1	BH04	Total/NA	Solid	8015NM Prep	
890-132-2	BH04	Total/NA	Solid	8015NM Prep	
MB 890-186/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 890-186/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 890-186/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-130-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-130-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-132-1	BH04	Total/NA	Solid	8015B NM	186
890-132-2	BH04	Total/NA	Solid	8015B NM	186
MB 890-186/1-A	Method Blank	Total/NA	Solid	8015B NM	186
LCS 890-186/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	186
LCSD 890-186/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	186
890-130-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	186
890-130-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	186

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-132-1
SDG: TE012921008

HPLC/IC

Leach Batch: 133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-132-1	BH04	Soluble	Solid	DI Leach	
890-132-2	BH04	Soluble	Solid	DI Leach	
MB 890-133/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 890-133/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 890-133/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-134-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-134-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-132-1	BH04	Soluble	Solid	300.0	133
890-132-2	BH04	Soluble	Solid	300.0	133
MB 890-133/1-A	Method Blank	Soluble	Solid	300.0	133
LCS 890-133/2-A	Lab Control Sample	Soluble	Solid	300.0	133
LCSD 890-133/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	133
890-134-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	133
890-134-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	133

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-132-1
SDG: TE012921008

Client Sample ID: BH04
Date Collected: 02/03/21 11:52
Date Received: 02/03/21 15:45

Lab Sample ID: 890-132-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			134	02/03/21 19:53	MC	XC
Total/NA	Analysis	8021B		1	146	02/05/21 10:29	PXS	XC
Total/NA	Prep	8015NM Prep			186	02/06/21 15:46	MC	XC
Total/NA	Analysis	8015B NM		1	215	02/09/21 23:25	BJH	XC
Soluble	Leach	DI Leach			133	02/03/21 17:27	MC	XC
Soluble	Analysis	300.0		1	137	02/03/21 22:02	MC	XC

Client Sample ID: BH04
Date Collected: 02/03/21 11:57
Date Received: 02/03/21 15:45

Lab Sample ID: 890-132-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			134	02/03/21 19:53	MC	XC
Total/NA	Analysis	8021B		1	146	02/05/21 11:14	PXS	XC
Total/NA	Prep	8015NM Prep			186	02/06/21 15:46	MC	XC
Total/NA	Analysis	8015B NM		1	215	02/09/21 23:45	BJH	XC
Soluble	Leach	DI Leach			133	02/03/21 17:27	MC	XC
Soluble	Analysis	300.0		1	137	02/03/21 22:08	MC	XC

Laboratory References:
XC = Eurofins Xenco, Carlsbad, 1089 N Canal St., Carlsbad, NM 88220, TEL (575)988-3199

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-132-1
SDG: TE012921008

Laboratory: Eurofins Xenco, Carlsbad

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

Authority	Program	Identification Number	Expiration Date
Louisiana	NELAP	05092	06-30-21

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5030C	Solid	Total BTEX

Method Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-132-1
SDG: TE012921008

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XC
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XC
300.0	Anions, Ion Chromatography	MCAWW	XC
5030C	Purge and Trap	SW846	XC
8015NM Prep	Microextraction	SW846	XC
DI Leach	Deionized Water Leaching Procedure	ASTM	XC

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

XC = Eurofins Xenco, Carlsbad, 1089 N Canal St., Carlsbad, NM 88220, TEL (575)988-3199

Sample Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-132-1
SDG: TE012921008

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
890-132-1	BH04	Solid	02/03/21 11:52	02/03/21 15:45	
890-132-2	BH04	Solid	02/03/21 11:57	02/03/21 15:45	

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 Crasbad, 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

Project Manager:	Joseph Hernandez	Bill to: (If different)	Kyle Littrell
Company Name:	WSP, Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(281) 702-2329	Email:	

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 199	Turn Around	
Project Number:	TF012921008	Routine	☒
Project Location	Eddy county	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.0.8	Thermometer ID	
Received Intact:	(Yes) No		
Cooler Custody Seals:	(Yes) No N/A	Correction Factor:	
Sample Custody Seals:	(Yes) No N/A	Total Containers:	2

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	BH04	S	2/3/21	1152	2'	1		X	X	X
	BH04	S	2/3/21	1157	4'	1		X	X	X

ANALYSIS REQUEST

Preservative Codes

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

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

Sample Comments

890-132 Chain of Custody

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

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

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			02-03-21 1400			
3				4		
5				6		

Revised Date 022619 Rev. 2019 1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-132-1
SDG Number: TE012921008

Login Number: 132
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").	True	

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-133-1
Laboratory Sample Delivery Group: TE012921008
Client Project/Site: PLU 199
Revision: 1

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

Attn: Dan Moir

JKramer

Authorized for release by:
2/11/2021 9:54:43 AM

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

Client: WSP USA Inc.
Project/Site: PLU 199

Laboratory Job ID: 890-133-1
SDG: TE012921008

Table of Contents

Definitions/Glossary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-133-1
SDG: TE012921008

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-133-1
SDG: TE012921008

Job ID: 890-133-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-133-1

REVISION

The report being provided is a revision of the original report sent on 2/10/2021. The report (revision 1) is being revised due to Corrected certificate summary page for TPH 8015.

Report revision history

Receipt
The samples were received on 2/3/2021 2:20 PM; 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 890-136 and analytical batch 890-146 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

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

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-133-1
SDG: TE012921008

Client Sample ID: BH05
Date Collected: 02/03/21 11:18
Date Received: 02/03/21 14:20

Lab Sample ID: 890-133-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/06/21 05:50	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/06/21 05:50	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/06/21 05:50	1
Total BTEX	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/06/21 05:50	1
Xylenes, Total	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/06/21 05:50	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		02/03/21 19:53	02/06/21 05:50	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/03/21 19:53	02/06/21 05:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*102*		*70 - 130*	*02/03/21 19:53*	*02/06/21 05:50*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*02/03/21 19:53*	*02/06/21 05:50*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/10/21 00:06	1
Total TPH	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/10/21 00:06	1
>C10-C28	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/10/21 00:06	1
>C28-C35	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/10/21 00:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 135*	*02/06/21 15:46*	*02/10/21 00:06*	*1*
o-Terphenyl	*97*		*70 - 135*	*02/06/21 15:46*	*02/10/21 00:06*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.2**		9.96		mg/Kg			02/03/21 22:14	1

Client Sample ID: BH05
Date Collected: 02/03/21 11:22
Date Received: 02/03/21 14:20

Lab Sample ID: 890-133-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 11:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 11:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 11:51	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 11:51	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 11:51	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/03/21 19:53	02/05/21 11:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 11:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*96*		*70 - 130*	*02/03/21 19:53*	*02/05/21 11:51*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*02/03/21 19:53*	*02/05/21 11:51*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<49.8	U	49.8		mg/Kg		02/06/21 15:46	02/10/21 00:26	1
Total TPH	<49.8	U	49.8		mg/Kg		02/06/21 15:46	02/10/21 00:26	1
>C10-C28	<49.8	U	49.8		mg/Kg		02/06/21 15:46	02/10/21 00:26	1
>C28-C35	<49.8	U	49.8		mg/Kg		02/06/21 15:46	02/10/21 00:26	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-133-1
SDG: TE012921008

Client Sample ID: BH05
Date Collected: 02/03/21 11:22
Date Received: 02/03/21 14:20

Lab Sample ID: 890-133-2
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 135*	*02/06/21 15:46*	*02/10/21 00:26*	*1*
o-Terphenyl	*93*		*70 - 135*	*02/06/21 15:46*	*02/10/21 00:26*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<9.96	U	9.96		mg/Kg			02/03/21 22:19	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-133-1
SDG: TE012921008

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DFBZ1 (70-130)	BFB1 (70-130)
890-130-A-1-C MS	Matrix Spike	98	100
890-130-A-1-D MSD	Matrix Spike Duplicate	94	97
890-133-1	BH05	102	100
890-133-2	BH05	96	104
890-139-A-4-B MS	Matrix Spike	100	100
890-139-A-4-C MSD	Matrix Spike Duplicate	98	96
LCS 890-134/2-A	Lab Control Sample	97	95
LCS 890-136/2-A	Lab Control Sample	97	97
LCSD 890-134/3-A	Lab Control Sample Dup	99	99
LCSD 890-136/3-A	Lab Control Sample Dup	94	96
MB 890-134/1-A	Method Blank	98	111
MB 890-136/1-A	Method Blank	102	103

Surrogate Legend

DFBZ = 1,4-Difluorobenzene

BFB = 4-Bromofluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-135)	OTPH1 (70-135)
890-130-A-1-F MS	Matrix Spike	117	106
890-130-A-1-G MSD	Matrix Spike Duplicate	119	108
890-133-1	BH05	100	97
890-133-2	BH05	96	93
LCS 890-186/2-A	Lab Control Sample	114	105
LCSD 890-186/3-A	Lab Control Sample Dup	110	100
MB 890-186/1-A	Method Blank	96	94

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-133-1
SDG: TE012921008

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 890-134/1-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 134

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/03/21 19:53	02/05/21 06:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/21 19:53	02/05/21 06:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*98*		*70 - 130*	*02/03/21 19:53*	*02/05/21 06:48*	*1*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*02/03/21 19:53*	*02/05/21 06:48*	*1*

Lab Sample ID: LCS 890-134/2-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 134

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09494		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.09299		mg/Kg		93	71 - 129		
Toluene			0.100	0.09355		mg/Kg		94	70 - 130		
m,p-Xylenes			0.200	0.1846		mg/Kg		92	70 - 135		
o-Xylene			0.100	0.09335		mg/Kg		93	71 - 133		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Difluorobenzene	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 890-134/3-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 134

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1002		mg/Kg		100	70 - 130	5	35
Ethylbenzene			0.100	0.09780		mg/Kg		98	71 - 129	5	35
Toluene			0.100	0.09930		mg/Kg		99	70 - 130	6	35
m,p-Xylenes			0.200	0.1894		mg/Kg		95	70 - 135	3	35
o-Xylene			0.100	0.09894		mg/Kg		99	71 - 133	6	35

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

Lab Sample ID: 890-130-A-1-C MS
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 134

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00199	U	0.101	0.09884		mg/Kg		98	70 - 130		

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-133-1
SDG: TE012921008

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

Lab Sample ID: 890-130-A-1-C MS
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 134

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00199	U	0.101	0.09728		mg/Kg		96	71 - 129
Toluene	<0.00199	U	0.101	0.09699		mg/Kg		96	70 - 130
m,p-Xylenes	<0.00398	U	0.202	0.1928		mg/Kg		96	70 - 135
o-Xylene	<0.00199	U	0.101	0.09796		mg/Kg		97	71 - 133

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,4-Difluorobenzene	*98*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-130-A-1-D MSD
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 134

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0994	0.1059		mg/Kg		107	70 - 130	7	35
Ethylbenzene	<0.00199	U	0.0994	0.1043		mg/Kg		105	71 - 129	7	35
Toluene	<0.00199	U	0.0994	0.1027		mg/Kg		103	70 - 130	6	35
m,p-Xylenes	<0.00398	U	0.199	0.2050		mg/Kg		103	70 - 135	6	35
o-Xylene	<0.00199	U	0.0994	0.1040		mg/Kg		105	71 - 133	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,4-Difluorobenzene	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: MB 890-136/1-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 136

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/03/21 20:06	02/05/21 20:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/03/21 20:06	02/05/21 20:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/03/21 20:06	02/05/21 20:06	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		02/03/21 20:06	02/05/21 20:06	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg		02/03/21 20:06	02/05/21 20:06	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/03/21 20:06	02/05/21 20:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/03/21 20:06	02/05/21 20:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*102*		*70 - 130*	*02/03/21 20:06*	*02/05/21 20:06*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*02/03/21 20:06*	*02/05/21 20:06*	*1*

Lab Sample ID: LCS 890-136/2-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 136

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene			0.100	0.09769		mg/Kg		98	70 - 130
Ethylbenzene			0.100	0.09480		mg/Kg		95	71 - 129

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-133-1
SDG: TE012921008

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

Lab Sample ID: LCS 890-136/2-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 136

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	0.100	0.09539		mg/Kg		95	70 - 130
m,p-Xylenes	0.200	0.1870		mg/Kg		94	70 - 135
o-Xylene	0.100	0.09692		mg/Kg		97	71 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Difluorobenzene	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 890-136/3-A
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 136

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.09775		mg/Kg		98	70 - 130	0	35
Ethylbenzene	0.100	0.09646		mg/Kg		96	71 - 129	2	35
Toluene	0.100	0.09628		mg/Kg		96	70 - 130	1	35
m,p-Xylenes	0.200	0.1919		mg/Kg		96	70 - 135	3	35
o-Xylene	0.100	0.09522		mg/Kg		95	71 - 133	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Difluorobenzene	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 890-139-A-4-B MS
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 136

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.101	0.09904		mg/Kg		98	70 - 130
Ethylbenzene	<0.00200	U F2 F1	0.101	0.02129	F1	mg/Kg		21	71 - 129
Toluene	<0.00200	U	0.101	0.07812		mg/Kg		77	70 - 130
m,p-Xylenes	<0.00399	U F1	0.202	0.1412		mg/Kg		70	70 - 135
o-Xylene	<0.00200	U	0.101	0.09511		mg/Kg		94	71 - 133

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

Lab Sample ID: 890-139-A-4-C MSD
Matrix: Solid
Analysis Batch: 146

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 136

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.09403		mg/Kg		94	70 - 130	5	35
Ethylbenzene	<0.00200	U F2 F1	0.0996	0.03654	F2 F1	mg/Kg		37	71 - 129	53	35
Toluene	<0.00200	U	0.0996	0.07677		mg/Kg		77	70 - 130	2	35
m,p-Xylenes	<0.00399	U F1	0.199	0.1037	F1	mg/Kg		52	70 - 135	31	35
o-Xylene	<0.00200	U	0.0996	0.09398		mg/Kg		94	71 - 133	1	35

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-133-1
SDG: TE012921008

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

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,4-Difluorobenzene	98		70 - 130
4-Bromofluorobenzene (Surr)	96		70 - 130

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

Lab Sample ID: MB 890-186/1-A
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 186

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 19:43	1
Total TPH	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 19:43	1
>C10-C28	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 19:43	1
>C28-C35	<50.0	U	50.0		mg/Kg		02/06/21 15:46	02/09/21 19:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 135	02/06/21 15:46	02/09/21 19:43	1
o-Terphenyl	94		70 - 135	02/06/21 15:46	02/09/21 19:43	1

Lab Sample ID: LCS 890-186/2-A
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 186

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C6-C10			1000	1044		mg/Kg		104	70 - 135		
>C10-C28			1000	1004		mg/Kg		100	70 - 135		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	114		70 - 135
o-Terphenyl	105		70 - 135

Lab Sample ID: LCSD 890-186/3-A
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 186

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10			1000	1052		mg/Kg		105	70 - 135	1	25
>C10-C28			1000	1044		mg/Kg		104	70 - 135	4	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	110		70 - 135
o-Terphenyl	100		70 - 135

Lab Sample ID: 890-130-A-1-F MS
Matrix: Solid
Analysis Batch: 215

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 186

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
C6-C10	<50.3	U	997	1090		mg/Kg		109	70 - 135		
Total TPH	<50.3	U	1990	2154		mg/Kg		0			
>C10-C28	<50.3	U	997	1064		mg/Kg		107	70 - 135		

QC Sample Results

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-133-1
SDG: TE012921008

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

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	117		70 - 135
o-Terphenyl	106		70 - 135

Lab Sample ID: 890-130-A-1-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 215 — **Prep Batch: 186**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10	<50.3	U	1000	1054		mg/Kg		105	70 - 135	3	35
Total TPH	<50.3	U	2000	2108		mg/Kg		0		NC	
>C10-C28	<50.3	U	1000	1054		mg/Kg		105	70 - 135	1	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	119		70 - 135
o-Terphenyl	108		70 - 135

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 890-133/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 137

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			02/03/21 20:49	1

Lab Sample ID: LCS 890-133/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 137

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			500	496.2		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 890-133/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 137

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			500	493.5		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-134-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 137

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	82.2		500	588.7		mg/Kg		101	90 - 110		

Lab Sample ID: 890-134-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 137

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	82.2		499	551.1		mg/Kg		94	90 - 110	7	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-133-1
SDG: TE012921008

GC VOA

Prep Batch: 134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-133-1	BH05	Total/NA	Solid	5030C	
890-133-2	BH05	Total/NA	Solid	5030C	
MB 890-134/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 890-134/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 890-134/3-A	Lab Control Sample Dup	Total/NA	Solid	5030C	
890-130-A-1-C MS	Matrix Spike	Total/NA	Solid	5030C	
890-130-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5030C	

Prep Batch: 136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 890-136/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 890-136/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 890-136/3-A	Lab Control Sample Dup	Total/NA	Solid	5030C	
890-139-A-4-B MS	Matrix Spike	Total/NA	Solid	5030C	
890-139-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5030C	

Analysis Batch: 146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-133-1	BH05	Total/NA	Solid	8021B	134
890-133-2	BH05	Total/NA	Solid	8021B	134
MB 890-134/1-A	Method Blank	Total/NA	Solid	8021B	134
MB 890-136/1-A	Method Blank	Total/NA	Solid	8021B	136
LCS 890-134/2-A	Lab Control Sample	Total/NA	Solid	8021B	134
LCS 890-136/2-A	Lab Control Sample	Total/NA	Solid	8021B	136
LCSD 890-134/3-A	Lab Control Sample Dup	Total/NA	Solid	8021B	134
LCSD 890-136/3-A	Lab Control Sample Dup	Total/NA	Solid	8021B	136
890-130-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	134
890-130-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	134
890-139-A-4-B MS	Matrix Spike	Total/NA	Solid	8021B	136
890-139-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	136

GC Semi VOA

Prep Batch: 186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-133-1	BH05	Total/NA	Solid	8015NM Prep	
890-133-2	BH05	Total/NA	Solid	8015NM Prep	
MB 890-186/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 890-186/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 890-186/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-130-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-130-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-133-1	BH05	Total/NA	Solid	8015B NM	186
890-133-2	BH05	Total/NA	Solid	8015B NM	186
MB 890-186/1-A	Method Blank	Total/NA	Solid	8015B NM	186
LCS 890-186/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	186
LCSD 890-186/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	186
890-130-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	186

QC Association Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-133-1
SDG: TE012921008

GC Semi VOA (Continued)

Analysis Batch: 215 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-130-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	186

HPLC/IC

Leach Batch: 133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-133-1	BH05	Soluble	Solid	DI Leach	
890-133-2	BH05	Soluble	Solid	DI Leach	
MB 890-133/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 890-133/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 890-133/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-134-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-134-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-133-1	BH05	Soluble	Solid	300.0	133
890-133-2	BH05	Soluble	Solid	300.0	133
MB 890-133/1-A	Method Blank	Soluble	Solid	300.0	133
LCS 890-133/2-A	Lab Control Sample	Soluble	Solid	300.0	133
LCSD 890-133/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	133
890-134-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	133
890-134-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	133

Lab Chronicle

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-133-1
SDG: TE012921008

Client Sample ID: BH05
Date Collected: 02/03/21 11:18
Date Received: 02/03/21 14:20

Lab Sample ID: 890-133-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			134	02/03/21 19:53	MC	XC
Total/NA	Analysis	8021B		1	146	02/06/21 05:50	PXS	XC
Total/NA	Prep	8015NM Prep			186	02/06/21 15:46	MC	XC
Total/NA	Analysis	8015B NM		1	215	02/10/21 00:06	BJH	XC
Soluble	Leach	DI Leach			133	02/03/21 17:27	MC	XC
Soluble	Analysis	300.0		1	137	02/03/21 22:14	MC	XC

Client Sample ID: BH05
Date Collected: 02/03/21 11:22
Date Received: 02/03/21 14:20

Lab Sample ID: 890-133-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			134	02/03/21 19:53	MC	XC
Total/NA	Analysis	8021B		1	146	02/05/21 11:51	PXS	XC
Total/NA	Prep	8015NM Prep			186	02/06/21 15:46	MC	XC
Total/NA	Analysis	8015B NM		1	215	02/10/21 00:26	BJH	XC
Soluble	Leach	DI Leach			133	02/03/21 17:27	MC	XC
Soluble	Analysis	300.0		1	137	02/03/21 22:19	MC	XC

Laboratory References:
XC = Eurofins Xenco, Carlsbad, 1089 N Canal St., Carlsbad, NM 88220, TEL (575)988-3199

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-133-1
SDG: TE012921008

Laboratory: Eurofins Xenco, Carlsbad

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

Authority	Program	Identification Number	Expiration Date
Louisiana	NELAP	05092	06-30-21

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5030C	Solid	Total BTEX

Method Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-133-1
SDG: TE012921008

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XC
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XC
300.0	Anions, Ion Chromatography	MCAWW	XC
5030C	Purge and Trap	SW846	XC
8015NM Prep	Microextraction	SW846	XC
DI Leach	Deionized Water Leaching Procedure	ASTM	XC

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

XC = Eurofins Xenco, Carlsbad, 1089 N Canal St., Carlsbad, NM 88220, TEL (575)988-3199

Sample Summary

Client: WSP USA Inc.
Project/Site: PLU 199

Job ID: 890-133-1
SDG: TE012921008

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
890-133-1	BH05	Solid	02/03/21 11:18	02/03/21 14:20	
890-133-2	BH05	Solid	02/03/21 11:22	02/03/21 14:20	

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 Crasbad, 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

Project Manager:	Joseph Hernandez	Bill to: (if different)	Kyle Littrell
Company Name:	WEP, Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(281) 702-2329	Email:	

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 199	Turn Around	
Project Number:	TE012921008	Routine	☒
Project Location	Eddy county	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	1/0.8	Thermometer ID	
Received Intact:	(Yes) No		
Cooler Custody Seals:	(Yes) No N/A	Correction Factor:	
Sample Custody Seals:	(Yes) No N/A	Total Containers:	2

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	BH05	S	2/3/21	1118	2'	1		X	X	X
	BH05	S	2/3/21	1122	4'	1		X	X	X

ANALYSIS REQUEST

Preservative Codes

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

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

Sample Comments

890-133 Chain of Custody

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			02-03-21 1410	2		
3				4		
5				6		

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-133-1
SDG Number: TE012921008

Login Number: 133
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").	True	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 21346

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 21346
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Approved. However, the depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater. In this particular case, please address the chloride concentration of 1,160 mg/kg at 2' found in BH-1 during P&A. Please remember to date the C141 Closure form upon submittal.	6/8/2022