

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	NAPP2129840452
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.01855 Longitude -103.93630
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Ross Draw 25 North	Site Type Tank Battery
Date Release Discovered 10/12/2021	API# (if applicable)

Unit Letter	Section	Township	Range	County
B	25	26S	29E	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)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 30.48	Volume Recovered (bbls) 30.00
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

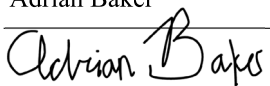
Cause of Release A nipple broke off the air eliminator for a water transfer pump, releasing fluids both inside containment and onto ground. A vac truck recovered all contained fluid. A third-party contractor has been retained for remediation activities.

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? A release greater than or equal to 25 barrels.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by Garrett Green to 'emily.hernandez@state.nm.us'; 'Mike Bratcher'; 'Victoria Venegas'; 'Rob Hamlet' on Tuesday, October 12, 2021 2:00 PM 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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: NA	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: Adrian Baker	Title: SSHE Coordinator
Signature: 	Date: 10/25/21
email: adrian.baker@exxonmobil.com	Telephone: 432-236-3808
<u>OCD Only</u>	
Received by: Ramona Marcus	Date: 11/1/2021

NAPP2129840452

Location:	Ross Draw 25 N Battery	
Spill Date:	10/12/2021	
Area 1		
Approximate Area =	168.44	cu.ft.
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	30.00	bbls
Area 2		
Approximate Area =	143.00	sq. ft.
Average Saturation (or depth) of spill =	1.50	inches
Average Porosity Factor =		
0.15		
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	0.48	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	30.48	bbls
TOTAL VOLUME RECOVERED		
Total Crude Oil =	0.00	bbls
Total Produced Water =	30.00	bbls

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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?	<u>> 100</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.

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

Printed Name Adrian Baker Title: Environmental Coordinator
Signature: Adrian Baker Date: 01/10/2022 Telephone: _____
email: adrian.baker@exxonmobil.com 432-236-3808

OCD Only

Received by: _____ Date: _____

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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 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 OCD 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 of the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Adrian Baker Title: Environmental Coordinator
Signature:  Date: 01/10/2022
Email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

ODC 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:  Date: 03/14/2022
Printed Name: Jennifer Nobui Title: Environmental Specialist A



WSP USA

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

January 10, 2022

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

**RE: Closure Request
Ross Draw 25 North Tank Battery
Incident Number NAPP2129840452
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, soil sampling, and excavation activities at the Ross Draw 25 North Tank Battery (Site) in Unit B, Section 25, Township 26 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil following a release of produced water at the Site. Based on the excavation activities and laboratory analytical results from the soil sampling events, XTO is submitting this Closure Request, describing remediation that has occurred and requesting no further action (NFA) for Incident Number NAPP2129840452.

RELEASE BACKGROUND

On October 12, 2021, a nipple broke off the air eliminator for a water transfer pump, resulting in the release of 30.48 barrels (bbls) of produced water within the lined containment and onto the surface of the well pad. A vacuum truck was immediately dispatched to the Site to recover freestanding fluids; approximately 30 bbls of produced water were recovered from within the lined containment. XTO immediately reported the release to the New Mexico Oil Conservation Division (NMOCD) via email on October 12, 2021. A Release Notification Form C-141 (Form C-141) was submitted on October 25, 2021, and the release was assigned Incident Number NAPP2129840452.

SITE CHARACTERIZATION

WSP characterized the Site according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted well is New Mexico Office of the State Engineer (NMOSE) well C-4561, located approximately 0.3 miles northwest of the Site. According to the well record filed in July 2021, C-4561 has a total depth of



105 feet bgs and no groundwater was encountered, indicating depth to groundwater is greater than 105 feet bgs. Nearby NMOSE and United States Geological Survey (USGS) wells are depicted on Figure 1 and the referenced well records are included in Attachment 1.

The closest continuously flowing water or significant watercourse to the Site is dry wash, located approximately 422.4 feet northeast 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 underlain by unstable geology (high 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): 100 mg/kg
- Chloride: 600 mg/kg

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On November 1, 2021, WSP personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. WSP personnel collected two preliminary assessment soil samples (SS01 and SS02) within the release extent, from a depth of approximately 0.5 feet bgs to assess the lateral extent of impacted soil. Soil from the preliminary soil samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) and are presented on Figure 2.

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



Laboratory analytical results for preliminary soil samples SS01 and SS02 indicated that chloride concentrations exceeded the Closure Criteria; benzene, BTEX, and TPH concentrations were compliant with the Closure Criteria. Based on visible staining in the release area, elevated field screening results, and laboratory analytical results for the preliminary soil samples, excavation activities were warranted.

EXCAVATION SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

On December 10, 2021, WSP personnel returned to the Site to oversee excavation activities as indicated by visual observations, field screening activities, and laboratory analytical results for the preliminary soil samples. Excavation activities were performed using track-mounted backhoe and transport vehicle. To direct excavation activities, WSP screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. The excavation was completed to a depth of 1 foot bgs in the area around preliminary soil samples SS01 and SS02. Following removal of impacted soil, WSP collected a 5-point composite soil sample from the floor of the excavation. The 5-point composite sample was collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the sample by thoroughly mixing. Composite soil sample FS01 was collected from the floor of the excavation. Due to the shallow depth of the excavation, the floor sample was also representative of the excavation sidewalls. The excavation soil sample was collected, handled, and analyzed as described above. The excavation extent and excavation soil sample location are presented on Figure 3. Photographic documentation was conducted during the Site visits. A photographic log is included as Attachment 2.

The final excavation extent measured approximately 171 square feet. A total of approximately 6.3 cubic yards of impacted soil were removed during excavation activities. The impacted soil was transported and properly disposed of at the R360 facility located in Hobbs, New Mexico. After the completion of confirmation sampling, the excavation was secured with fencing.

Laboratory analytical results for excavation floor sample FS01, collected from the final excavation extent, indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. The laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Attachment 3.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the October 12, 2021 release of produced water. Based on the laboratory analytical results for the preliminary soil samples, impacted soil was excavated. Laboratory analytical results for the excavation soil sample collected from the final excavation extent indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Site Closure Criteria. Based on the excavation soil sample analytical results, no further remediation was required.



District II
Page 4

XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. As such, XTO respectfully requests NFA for Incident Number NAPP2129840452.

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

Sincerely,

WSP USA Inc.

A handwritten signature in black ink that reads "Hadlie Green".

Hadlie Green
Assistant Consultant, Geologist Scientist

A handwritten signature in black ink that reads "Ashley L. Ager".

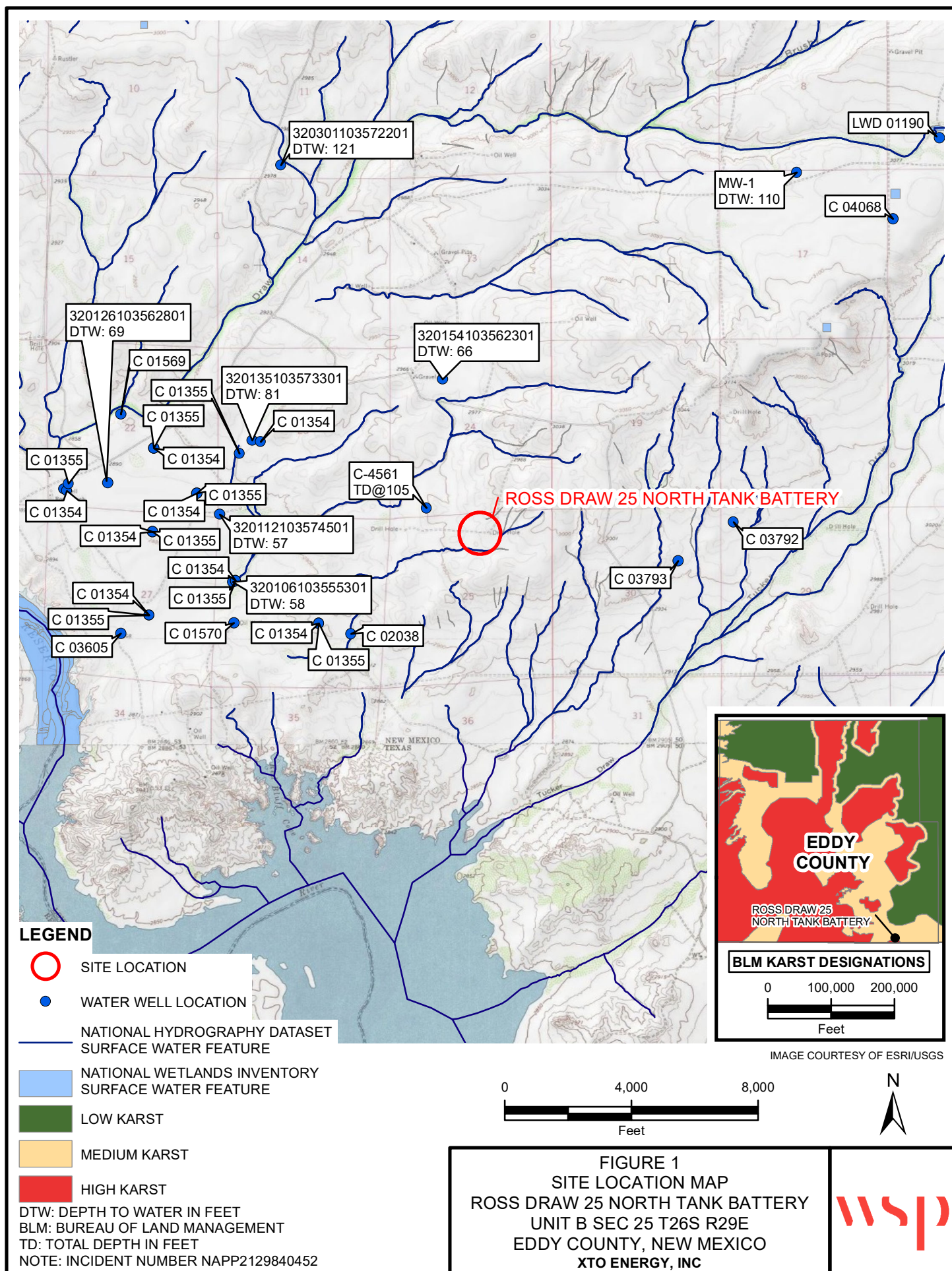
Ashley L. Ager, P.G.
Managing Director, Geologist

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

Attachments:

Figure 1 Site Location Map
Figure 2 Preliminary Soil Sample Locations
Figure 3 Excavation Soil Sample Location
Table 1 Soil Analytical Results
Attachment 1 Referenced Well Records
Attachment 2 Photographic Log
Attachment 3 Laboratory Analytical Reports

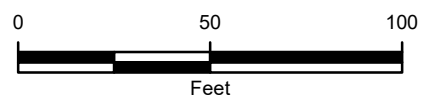
FIGURES



**LEGEND**

IMAGE COURTESY OF ESRI

- PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- RELEASE EXTENT



NOTE: INCIDENT NUMBER NAPP2129840452
 SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 2
 PRELIMINARY SOIL SAMPLE LOCATIONS
 ROSS DRAW 25 NORTH TANK BATTERY
 UNIT B SEC 25 T26S R29E
 EDDY COUNTY, NEW MEXICO
 XTO ENERGY, INC.



LEGEND

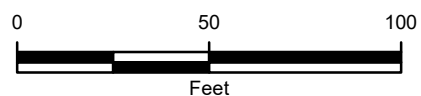


FLOOR SAMPLE IN COMPLIANCE
WITH APPLICABLE CLOSURE CRITERIA



EXCAVATION EXTENT

IMAGE COURTESY OF ESRI



NOTE: INCIDENT NUMBER NAPP2129840452
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
ROSS DRAW 25 NORTH TANK BATTERY
UNIT B SEC 25 T26S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



Table 1

Soil Analytical Results
 Ross Draw 25 North Tank Battery
 NAPP2129840452
 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	NE	100	600
Surface Samples										
SS01	11/01/2021	0.5	<0.002	<0.004	<49.9	<49.9	<49.9	<49.9	<49.9	9,050
SS02	11/01/2021	0.5	<0.002	<0.004	<49.9	<49.9	<49.9	<49.9	<49.9	3,390
Excavation Floor Samples										
FS01	12/10/2021	1	<0.002	<0.004	<50.0	<50.0	<50.0	<50.0	<50.0	465

Notes:

ft - feet/foot

mg/kg - milligrams per kilograms

BTEX - benzene, toluene, ethylbenzene, and total xylenes

TPH - total petroleum hydrocarbons

DRO - diesel range organics

GRO - gasoline range organics

ORO - oil range organics

NMOCD - New Mexico Oil Conservation Division

NMAC - New Mexico Administrative Code

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

NE - Not Established

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

Greyed data represents samples that were excavated



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

OSE DJJ AUG 17 2021 PM 3:11

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD1 (BH-01)		WELL TAG ID NO. n/a		OSE FILE NO(S). C-4561			
	WELL OWNER NAME(S) XTO Energy (Kyle Littrell)				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 6401 Holiday Hill Dr.				CITY Midland	STATE TX	ZIP 79707	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 1	SECONDS 14.17	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
		LONGITUDE 103	56	30.83	W	* DATUM REQUIRED: WGS 84		
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE SE SW Sec. 31T23S R33E								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 07/28/2021		DRILLING ENDED 07/28/2021		DEPTH OF COMPLETED WELL (FT) temporary well material	BORE HOLE DEPTH (FT) 105	DEPTH WATER FIRST ENCOUNTERED (FT) n/a	
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) n/a		
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger							
	DEPTH (feet bgl)		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)
	FROM	TO						
	0	105	±6.5	Boring- HSA	--	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						

FOR OSE INTERNAL USE

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

FILE NO.	C-4561	POD NO.	POD1	TRN NO.	701043
LOCATION	24S-29E-24 433			WELL TAG ID NO.	PAGE 1 OF 2

DSE DTI AUG 17 2021 PM3:11

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		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)
	FROM	TO				
	0	5	5	Caliche, poor- moderate consolidation, Off white-tan	Y ✓ N	
	5	10	5	Sand, fine grained, poorly graded, with caliche gravel, Reddish Brown	Y ✓ N	
	10	25	15	Clayey Sand, fine grained, poorly graded, Reddish Brown	Y ✓ N	
	25	30	5	Silty Sand, fine grained, poorly graded, Reddish Brown , Dry	Y ✓ N	
	30	45	15	Gravelly Silty, some gypsum, graded, Reddish Brown , Dry	Y ✓ N	
	45	60	15	Siltstone, poorly cemented, Reddish Brown, Dry	Y ✓ N	
	60	105	45	Claystone, Low plasticity,cohesive, some gypsum, Reddish Brown-Dark , moist	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: <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> 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, Carmelo Trevino, Cameron Pruitt		

6. SIGNATURE	SIGNATURE OF DRILLER / PRINT SIGNED NAME	DATE
	<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;"> Jackie D. Atkins </div> <div style="text-align: right;"> 08/16/2021 </div> </div>	

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 06/30/2017)	
FILE NO.	C-456	POD NO.	POD 1
LOCATION	24S-29E-74433	TRN NO.	701043
		WELL TAG ID NO.	PAGE 2 OF 2

Eddy County, New Mexico

Latitude 32°01'54", Longitude 103°56'23" NAD27

Land-surface elevation 2,974 feet above NAVD88

The depth of the well is 200 feet below land surface.

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

Date	Time	Water-level date-time accuracy	Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum
1975-12-09		D	62610		2911.00	NGVD29
1975-12-09		D	62611		2912.55	NAVD88
1975-12-09		D	72019	61.45		
1976-01-16		D	62610		2907.70	NGVD29
1976-01-16		D	62611		2909.25	NAVD88
1976-01-16		D	72019	64.75		
1977-01-14		D	62610		2909.04	NGVD29
1977-01-14		D	62611		2910.59	NAVD88
1977-01-14		D	72019	63.41		
1978-02-23		D	62610		2906.98	NGVD29
1978-02-23		D	62611		2908.53	NAVD88
1978-02-23		D	72019	65.47		
1983-01-26		D	62610		2906.01	NGVD29
1983-01-26		D	62611		2907.56	NAVD88
1983-01-26		D	72019	66.44		
1987-10-14		D	62610		2922.64	NGVD29
1987-10-14		D	62611		2924.19	NAVD88
1987-10-14		D	72019	49.81		
1992-11-04		D	62610		2913.17	NGVD29
1992-11-04		D	62611		2914.72	NAVD88
1992-11-04		D	72019	59.28		
1998-01-22		D	62610		2906.03	NGVD29
1998-01-22		D	62611		2907.58	NAVD88
1998-01-22		D	72019	66.42		

ATTACHMENT 2: PHOTOGRAPHIC LOG

**PHOTOGRAPHIC LOG**

XTO Energy, Inc.	Ross Draw 25 North Eddy County, NM	NAPP2129840452
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Photo No.	Date	
1	November 1, 2021	
View facing south of the release that occurred on October 12, 2021.		

Photo No.	Date	
2	December 12, 2021	
View facing south of excavation extent.		

**PHOTOGRAPHIC LOG**

XTO Energy, Inc.	Ross Draw 25 North Eddy County, NM	NAPP2129840452
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Photo No.	Date	
3	December 12, 2021	
View facing north of excavation extent.		 A photograph showing a large, rectangular, tan-colored industrial building in the background. In the foreground, there is a deep, rectangular excavation pit filled with light-colored soil and debris. A white pickup truck is parked on the right side of the excavation. A person wearing a hard hat and safety vest is standing near the edge of the excavation. The ground is sandy and uneven. The sky is blue with some clouds.

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-1515-1

Laboratory Sample Delivery Group: 31403236.010.0129

Client Project/Site: Ross Draw 25 North Battery

For:

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

Attn: Kalei Jennings

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:
11/11/2021 1:08:01 PM

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

LINKS

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results through

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www.eurofinsus.com/Env

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

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

Client: WSP USA Inc.
Project/Site: Ross Draw 25 North Battery

Laboratory Job ID: 890-1515-1
SDG: 31403236.010.0129

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Definitions/Glossary

Client: WSP USA Inc.

Job ID: 890-1515-1

Project/Site: Ross Draw 25 North Battery

SDG: 31403236.010.0129

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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.
α	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

Eurofins Xenco, Carlsbad

Case Narrative

Client: WSP USA Inc.
Project/Site: Ross Draw 25 North Battery

Job ID: 890-1515-1
SDG: 31403236.010.0129

Job ID: 890-1515-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

**Job Narrative
890-1515-1**

Receipt

The samples were received on 11/1/2021 4:29 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.0°C

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-11824/5-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-11243 and analytical batch 880-11705 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: Ross Draw 25 North Battery

Job ID: 890-1515-1
SDG: 31403236.010.0129

Client Sample ID: SS01

Lab Sample ID: 890-1515-1

Date Collected: 11/01/21 13:45

Matrix: Solid

Date Received: 11/01/21 16:29

Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/10/21 16:00	11/10/21 22:05	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/10/21 16:00	11/10/21 22:05	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/10/21 16:00	11/10/21 22:05	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/10/21 16:00	11/10/21 22:05	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/10/21 16:00	11/10/21 22:05	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/10/21 16:00	11/10/21 22:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130	11/10/21 16:00	11/10/21 22:05	1
1,4-Difluorobenzene (Surr)	96		70 - 130	11/10/21 16:00	11/10/21 22:05	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			11/10/21 11:29	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/08/21 15:54	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		11/03/21 13:58	11/04/21 13:20	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/03/21 13:58	11/04/21 13:20	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/03/21 13:58	11/04/21 13:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	77		70 - 130	11/03/21 13:58	11/04/21 13:20	1
o-Terphenyl	73		70 - 130	11/03/21 13:58	11/04/21 13:20	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9050		101	mg/Kg			11/09/21 16:41	20

Client Sample ID: SS02

Lab Sample ID: 890-1515-2

Date Collected: 11/01/21 13:55

Matrix: Solid

Date Received: 11/01/21 16:29

Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/10/21 16:00	11/10/21 22:25	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/10/21 16:00	11/10/21 22:25	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/10/21 16:00	11/10/21 22:25	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		11/10/21 16:00	11/10/21 22:25	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/10/21 16:00	11/10/21 22:25	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		11/10/21 16:00	11/10/21 22:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		70 - 130	11/10/21 16:00	11/10/21 22:25	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Ross Draw 25 North Battery

Job ID: 890-1515-1
SDG: 31403236.010.0129

Client Sample ID: SS02

Lab Sample ID: 890-1515-2

Date Collected: 11/01/21 13:55

Matrix: Solid

Date Received: 11/01/21 16:29

Sample Depth: 0.5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	100		70 - 130	11/10/21 16:00	11/10/21 22:25	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			11/10/21 11:29	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/08/21 15:54	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		11/03/21 13:58	11/04/21 13:41	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/03/21 13:58	11/04/21 13:41	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/03/21 13:58	11/04/21 13:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130			11/03/21 13:58	11/04/21 13:41	1
o-Terphenyl	76		70 - 130			11/03/21 13:58	11/04/21 13:41	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3390		25.0	mg/Kg			11/09/21 16:48	5

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Ross Draw 25 North Battery

Job ID: 890-1515-1
SDG: 31403236.010.0129

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-8100-A-21-A MS	Matrix Spike	113	102
880-8100-A-21-B MSD	Matrix Spike Duplicate	117	104
890-1515-1	SS01	133 S1+	96
890-1515-2	SS02	121	100
890-1540-A-14-F MS	Matrix Spike	111	96
890-1540-A-14-G MSD	Matrix Spike Duplicate	110	96
LCS 880-11822/1-A	Lab Control Sample	111	106
LCS 880-11824/1-A	Lab Control Sample	112	102
LCSD 880-11822/2-A	Lab Control Sample Dup	106	95
LCSD 880-11824/2-A	Lab Control Sample Dup	108	101
MB 880-11822/5-A	Method Blank	109	94
MB 880-11824/5-A	Method Blank	62 S1-	111
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-1502-A-121-F MS	Matrix Spike	100	92
890-1502-A-121-G MSD	Matrix Spike Duplicate	92	84
890-1515-1	SS01	77	73
890-1515-2	SS02	84	76
LCS 880-11376/2-A	Lab Control Sample	108	88
LCSD 880-11376/3-A	Lab Control Sample Dup	103	95
MB 880-11376/1-A	Method Blank	89	94
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: WSP USA Inc.
Project/Site: Ross Draw 25 North Battery

Job ID: 890-1515-1
SDG: 31403236.010.0129

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-11822/5-A

Matrix: Solid

Analysis Batch: 11884

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11822

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/10/21 08:45	11/10/21 14:34	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/10/21 08:45	11/10/21 14:34	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/10/21 08:45	11/10/21 14:34	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/10/21 08:45	11/10/21 14:34	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/10/21 08:45	11/10/21 14:34	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/10/21 08:45	11/10/21 14:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	11/10/21 08:45	11/10/21 14:34	1
1,4-Difluorobenzene (Surr)	94		70 - 130	11/10/21 08:45	11/10/21 14:34	1

Lab Sample ID: LCS 880-11822/1-A

Matrix: Solid

Analysis Batch: 11884

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 11822

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.08476		mg/Kg		85	70 - 130
Toluene	0.100	0.07637		mg/Kg		76	70 - 130
Ethylbenzene	0.100	0.07943		mg/Kg		79	70 - 130
m-Xylene & p-Xylene	0.200	0.1662		mg/Kg		83	70 - 130
o-Xylene	0.100	0.08584		mg/Kg		86	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: LCSD 880-11822/2-A

Matrix: Solid

Analysis Batch: 11884

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 11822

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.100	0.08967		mg/Kg		90	70 - 130	6	35
Toluene	0.100	0.08292		mg/Kg		83	70 - 130	8	35
Ethylbenzene	0.100	0.08572		mg/Kg		86	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.1781		mg/Kg		89	70 - 130	7	35
o-Xylene	0.100	0.08929		mg/Kg		89	70 - 130	4	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: 890-1540-A-14-F MS

Matrix: Solid

Analysis Batch: 11884

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 11822

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00199	U	0.0996	0.09022		mg/Kg		90	70 - 130
Toluene	<0.00199	U	0.0996	0.08173		mg/Kg		82	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Ross Draw 25 North Battery

Job ID: 890-1515-1
SDG: 31403236.010.0129

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

Lab Sample ID: 890-1540-A-14-F MS

Matrix: Solid

Analysis Batch: 11884

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 11822

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00199	U	0.0996	0.08741		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.199	0.1810		mg/Kg		91	70 - 130
o-Xylene	<0.00199	U	0.0996	0.09148		mg/Kg		91	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: 890-1540-A-14-G MSD

Matrix: Solid

Analysis Batch: 11884

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 11822

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0998	0.09030		mg/Kg		90	70 - 130	0	35
Toluene	<0.00199	U	0.0998	0.08201		mg/Kg		82	70 - 130	0	35
Ethylbenzene	<0.00199	U	0.0998	0.08428		mg/Kg		84	70 - 130	4	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1778		mg/Kg		89	70 - 130	2	35
o-Xylene	<0.00199	U	0.0998	0.09011		mg/Kg		90	70 - 130	2	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: MB 880-11824/5-A

Matrix: Solid

Analysis Batch: 11888

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11824

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/10/21 09:30	11/10/21 12:41	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/10/21 09:30	11/10/21 12:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/10/21 09:30	11/10/21 12:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/10/21 09:30	11/10/21 12:41	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/10/21 09:30	11/10/21 12:41	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/10/21 09:30	11/10/21 12:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	62	S1-	70 - 130	11/10/21 09:30	11/10/21 12:41	1
1,4-Difluorobenzene (Surr)	111		70 - 130	11/10/21 09:30	11/10/21 12:41	1

Lab Sample ID: LCS 880-11824/1-A

Matrix: Solid

Analysis Batch: 11888

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 11824

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09671		mg/Kg		97	70 - 130
Toluene	0.100	0.1024		mg/Kg		102	70 - 130
Ethylbenzene	0.100	0.1078		mg/Kg		108	70 - 130
m-Xylene & p-Xylene	0.200	0.2145		mg/Kg		107	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Ross Draw 25 North Battery

Job ID: 890-1515-1
SDG: 31403236.010.0129

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

Lab Sample ID: LCS 880-11824/1-A

Matrix: Solid

Analysis Batch: 11888

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 11824

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	0.100	0.1036		mg/Kg		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: LCSD 880-11824/2-A

Matrix: Solid

Analysis Batch: 11888

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 11824

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.09531		mg/Kg		95	70 - 130	1	35
Toluene	0.100	0.1010		mg/Kg		101	70 - 130	1	35
Ethylbenzene	0.100	0.1067		mg/Kg		107	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.2085		mg/Kg		104	70 - 130	3	35
o-Xylene	0.100	0.1005		mg/Kg		100	70 - 130	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 880-8100-A-21-A MS

Matrix: Solid

Analysis Batch: 11888

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 11824

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.0998	0.08923		mg/Kg		89	70 - 130
Toluene	<0.00200	U	0.0998	0.09624		mg/Kg		95	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.1020		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1997		mg/Kg		99	70 - 130
o-Xylene	<0.00200	U	0.0998	0.09858		mg/Kg		98	70 - 130

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

Lab Sample ID: 880-8100-A-21-B MSD

Matrix: Solid

Analysis Batch: 11888

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 11824

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.08626		mg/Kg		86	70 - 130	3	35
Toluene	<0.00200	U	0.100	0.09392		mg/Kg		93	70 - 130	2	35
Ethylbenzene	<0.00200	U	0.100	0.09454		mg/Kg		95	70 - 130	8	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1841		mg/Kg		91	70 - 130	8	35
o-Xylene	<0.00200	U	0.100	0.08863		mg/Kg		88	70 - 130	11	35

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Ross Draw 25 North Battery

Job ID: 890-1515-1
SDG: 31403236.010.0129

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

Lab Sample ID: 880-8100-A-21-B MSD

Matrix: Solid

Analysis Batch: 11888

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 11824

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	117		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

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

Lab Sample ID: MB 880-11376/1-A

Matrix: Solid

Analysis Batch: 11414

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11376

	MB	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		11/03/21 13:58	11/04/21 09:53	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/03/21 13:58	11/04/21 09:53	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/03/21 13:58	11/04/21 09:53	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	89		70 - 130			11/03/21 13:58	11/04/21 09:53	1	
o-Terphenyl	94		70 - 130			11/03/21 13:58	11/04/21 09:53	1	

Lab Sample ID: LCS 880-11376/2-A

Matrix: Solid

Analysis Batch: 11414

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 11376

	Spike	LCS	LCS					%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	1000	977.8		mg/Kg		98	70 - 130		
Diesel Range Organics (Over C10-C28)	1000	838.1		mg/Kg		84	70 - 130		
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	108		70 - 130						
o-Terphenyl	88		70 - 130						

Lab Sample ID: LCSD 880-11376/3-A

Matrix: Solid

Analysis Batch: 11414

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 11376

	Spike	LCSD	LCSD					%Rec.	RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	965.5		mg/Kg		97	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	913.0		mg/Kg		91	70 - 130	9	20
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	103		70 - 130						
o-Terphenyl	95		70 - 130						

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Ross Draw 25 North Battery

Job ID: 890-1515-1
SDG: 31403236.010.0129

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

Lab Sample ID: 890-1502-A-121-F MS

Matrix: Solid

Analysis Batch: 11414

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 11376

	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	1036		mg/Kg		101	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	997	863.0		mg/Kg		84	70 - 130		

Lab Sample ID: 890-1502-A-121-G MSD

Matrix: Solid

Analysis Batch: 11414

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 11376

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	954.6		mg/Kg		93	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	789.2		mg/Kg		77	70 - 130	9	20
							</				

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-11243/1-A

Matrix: Solid

Analysis Batch: 11705

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			11/09/21 12:29	1

Lab Sample ID: LCS 880-11243/2-A

Matrix: Solid

Analysis Batch: 11705

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	251.9		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-11243/3-A

Matrix: Solid

Analysis Batch: 11705

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	253.1		mg/Kg		101	90 - 110	0	20

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.

Job ID: 890-1515-1

Project/Site: Ross Draw 25 North Battery

SDG: 31403236.010.0129

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-1502-A-124-G MS

Client Sample ID: Matrix Spike

Matrix: Solid

Prep Type: Soluble

Analysis Batch: 11705

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	831	F1	252	1043	F1	mg/Kg		84	90 - 110

Lab Sample ID: 890-1502-A-124-H MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Prep Type: Soluble

Analysis Batch: 11705

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	831	F1	252	1043	F1	mg/Kg		84	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: Ross Draw 25 North Battery

Job ID: 890-1515-1
SDG: 31403236.010.0129

GC VOA

Prep Batch: 11822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1515-1	SS01	Total/NA	Solid	5035	
890-1515-2	SS02	Total/NA	Solid	5035	
MB 880-11822/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11822/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11822/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1540-A-14-F MS	Matrix Spike	Total/NA	Solid	5035	
890-1540-A-14-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 11824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-11824/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11824/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11824/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-8100-A-21-A MS	Matrix Spike	Total/NA	Solid	5035	
880-8100-A-21-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 11884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1515-1	SS01	Total/NA	Solid	8021B	11822
890-1515-2	SS02	Total/NA	Solid	8021B	11822
MB 880-11822/5-A	Method Blank	Total/NA	Solid	8021B	11822
LCS 880-11822/1-A	Lab Control Sample	Total/NA	Solid	8021B	11822
LCSD 880-11822/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11822
890-1540-A-14-F MS	Matrix Spike	Total/NA	Solid	8021B	11822
890-1540-A-14-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	11822

Analysis Batch: 11888

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-11824/5-A	Method Blank	Total/NA	Solid	8021B	11824
LCS 880-11824/1-A	Lab Control Sample	Total/NA	Solid	8021B	11824
LCSD 880-11824/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11824
880-8100-A-21-A MS	Matrix Spike	Total/NA	Solid	8021B	11824
880-8100-A-21-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	11824

Analysis Batch: 11890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1515-1	SS01	Total/NA	Solid	Total BTEX	
890-1515-2	SS02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 11376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1515-1	SS01	Total/NA	Solid	8015NM Prep	
890-1515-2	SS02	Total/NA	Solid	8015NM Prep	
MB 880-11376/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-11376/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-11376/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1502-A-121-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1502-A-121-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Ross Draw 25 North Battery

Job ID: 890-1515-1
SDG: 31403236.010.0129

GC Semi VOA

Analysis Batch: 11414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1515-1	SS01	Total/NA	Solid	8015B NM	11376
890-1515-2	SS02	Total/NA	Solid	8015B NM	11376
MB 880-11376/1-A	Method Blank	Total/NA	Solid	8015B NM	11376
LCS 880-11376/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	11376
LCSD 880-11376/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	11376
890-1502-A-121-F MS	Matrix Spike	Total/NA	Solid	8015B NM	11376
890-1502-A-121-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	11376

Analysis Batch: 11598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1515-1	SS01	Total/NA	Solid	8015 NM	
890-1515-2	SS02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 11243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1515-1	SS01	Soluble	Solid	DI Leach	
890-1515-2	SS02	Soluble	Solid	DI Leach	
MB 880-11243/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11243/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11243/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1502-A-124-G MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1502-A-124-H MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 11705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1515-1	SS01	Soluble	Solid	300.0	11243
890-1515-2	SS02	Soluble	Solid	300.0	11243
MB 880-11243/1-A	Method Blank	Soluble	Solid	300.0	11243
LCS 880-11243/2-A	Lab Control Sample	Soluble	Solid	300.0	11243
LCSD 880-11243/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11243
890-1502-A-124-G MS	Matrix Spike	Soluble	Solid	300.0	11243
890-1502-A-124-H MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	11243

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Ross Draw 25 North Battery

Job ID: 890-1515-1
SDG: 31403236.010.0129

Client Sample ID: SS01

Lab Sample ID: 890-1515-1

Date Collected: 11/01/21 13:45

Matrix: Solid

Date Received: 11/01/21 16:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11822	11/10/21 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	11884	11/10/21 22:05	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	11890	11/10/21 11:29	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11598	11/08/21 15:54	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11376	11/03/21 13:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11414	11/04/21 13:20	AJ	XEN MID
Soluble	Leach	DI Leach			11243	11/02/21 12:46	CH	XEN MID
Soluble	Analysis	300.0		20	11705	11/09/21 16:41	CH	XEN MID

Client Sample ID: SS02

Lab Sample ID: 890-1515-2

Date Collected: 11/01/21 13:55

Matrix: Solid

Date Received: 11/01/21 16:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11822	11/10/21 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	11884	11/10/21 22:25	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	11890	11/10/21 11:29	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	11598	11/08/21 15:54	AJ	XEN MID
Total/NA	Prep	8015NM Prep			11376	11/03/21 13:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1	11414	11/04/21 13:41	AJ	XEN MID
Soluble	Leach	DI Leach			11243	11/02/21 12:46	CH	XEN MID
Soluble	Analysis	300.0		5	11705	11/09/21 16:48	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: Ross Draw 25 North Battery

Job ID: 890-1515-1
SDG: 31403236.010.0129

Laboratory: Eurofins Xenco, Midland

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

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

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

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

Method Summary

Client: WSP USA Inc.
Project/Site: Ross Draw 25 North Battery

Job ID: 890-1515-1
SDG: 31403236.010.0129

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: Ross Draw 25 North Battery

Job ID: 890-1515-1
SDG: 31403236.010.0129

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1515-1	SS01	Solid	11/01/21 13:45	11/01/21 16:29	0.5
890-1515-2	SS02	Solid	11/01/21 13:55	11/01/21 16:29	0.5

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12

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14



Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3333
Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
Phoenix AZ (480-355-0900) Atlanta GA (770-449-8800) Tampa FL (813) 281-3927
Hobbs NM (575-392-7550)

Work Order No: _____


Page 1 of 1

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Chain of Custody

Project Manager:	Kalei Jennings	Bill to: (if different)	Adrian Baker
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	Alexis.Castro@wsp.com Kalei.Jennings@wsp.com

Work Order Comments	
Program: UST/ST	<input type="checkbox"/> RRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting Level: I	<input type="checkbox"/> Level III <input type="checkbox"/> ST/UST <input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables: EDD <input type="checkbox"/>	Adapt <input type="checkbox"/> Other:

Project Name:	Ross Draw 25 North Battery	Turn Around	<div>ANALYSIS REQUEST</div> 	Work Order Notes
Project Number:	31403236.010.0129	Routine <input checked="" type="checkbox"/>		INC: NAPP2129840452
P.O. Number:	10/12/2021	Rush:		
Sampler's Name:	Alexis Castro	Due Date:		


SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	2.7 / 17.0	Thermometer ID					
Received Intact:	Yes	No	T-PA-681				
Cooler Custody Seals:	Yes	No	Correction Factor:		-0.2		
Sample Custody Seals:	Yes	No	Total Containers:				

Number of Containers

(EPA 8015)

(EPA 0=8021)

(EPA 300.0)



890-1515 Chain of Custody

TAT starts the day received by the lab. If received by 4:30pm

[illegible]

Total	200.7 / 6010	200.8 / 6020:
8RCRA	13PPM	Texas 11
Al	Sb	As
Ba	Be	B
Cd	Ca	Cr
Co	Cu	Fe
Pb	Mg	Mn
Mo	Ni	K
Se	Ag	SiO ₂
Na	Sr	Tl
Sn	U	V
Zn		

[illegible]

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xeno, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xeno 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 Xeno. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xeno, 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
<i>Mr. Lube</i>	<i>N. Lube</i>	11/01/21 4:29			

Revised Date 05/11/18 Rev. 2018

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1515-1

SDG Number: 31403236.010.0129

Login Number: 1515

List Number: 1

Creator: Olivas, Nathaniel

List Source: Eurofins Xenco, Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1515-1

SDG Number: 31403236.010.0129

Login Number: 1515

List Number: 2

Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland

List Creation: 11/03/21 11:16 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.6/4.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-1724-1

Laboratory Sample Delivery Group: 31403236.020.0129

Client Project/Site: Ross Draw 25 N

For:

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

Attn: Tacoma Morrissey

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:
12/23/2021 11:48:12 AM

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

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

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

Client: WSP USA Inc.
Project/Site: Ross Draw 25 N

Laboratory Job ID: 890-1724-1
SDG: 31403236.020.0129

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: Ross Draw 25 N

Job ID: 890-1724-1
SDG: 31403236.020.0129

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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: Ross Draw 25 N

Job ID: 890-1724-1
SDG: 31403236.020.0129

Job ID: 890-1724-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1724-1

Receipt

The sample was received on 12/15/2021 3:49 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.4°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: Ross Draw 25 N

Job ID: 890-1724-1
SDG: 31403236.020.0129

Client Sample ID: FS01

Lab Sample ID: 890-1724-1

Date Collected: 12/10/21 12:50

Matrix: Solid

Date Received: 12/15/21 15:49

Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		12/17/21 15:00	12/18/21 04:16	1
Toluene	<0.00199	U	0.00199	mg/Kg		12/17/21 15:00	12/18/21 04:16	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		12/17/21 15:00	12/18/21 04:16	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		12/17/21 15:00	12/18/21 04:16	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		12/17/21 15:00	12/18/21 04:16	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		12/17/21 15:00	12/18/21 04:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130	12/17/21 15:00	12/18/21 04:16	1
1,4-Difluorobenzene (Surr)	93		70 - 130	12/17/21 15:00	12/18/21 04:16	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/22/21 12:38	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			12/23/21 12:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/17/21 14:20	12/20/21 14:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/17/21 14:20	12/20/21 14:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/17/21 14:20	12/20/21 14:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	117		70 - 130	12/17/21 14:20	12/20/21 14:36	1
o-Terphenyl	119		70 - 130	12/17/21 14:20	12/20/21 14:36	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	465		4.97	mg/Kg			12/20/21 12:42	1

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Surrogate Summary

Client: WSP USA Inc.
Project/Site: Ross Draw 25 N

Job ID: 890-1724-1
SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-9404-A-21-E MS	Matrix Spike	110	97
880-9404-A-21-F MSD	Matrix Spike Duplicate	106	96
890-1724-1	FS01	120	93
LCS 880-15018/1-A	Lab Control Sample	108	92
LCSD 880-15018/2-A	Lab Control Sample Dup	109	94
MB 880-14947/5-A	Method Blank	127	103
MB 880-15018/5-A	Method Blank	126	105
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-1724-1	FS01	117	119
890-1727-A-21-I MS	Matrix Spike	113	98
890-1727-A-21-J MSD	Matrix Spike Duplicate	111	97
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO2 (70-130)	OTPH2 (70-130)
LCS 880-15090/2-A	Lab Control Sample	100	97
LCSD 880-15090/3-A	Lab Control Sample Dup	110	116
MB 880-15090/1-A	Method Blank	142 S1+	233 S1+
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: WSP USA Inc.
Project/Site: Ross Draw 25 N

Job ID: 890-1724-1
SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-14947/5-A

Matrix: Solid

Analysis Batch: 15044

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 14947

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/17/21 07:30	12/17/21 12:15	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/17/21 07:30	12/17/21 12:15	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/17/21 07:30	12/17/21 12:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/17/21 07:30	12/17/21 12:15	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/17/21 07:30	12/17/21 12:15	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/17/21 07:30	12/17/21 12:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	127		70 - 130	12/17/21 07:30	12/17/21 12:15	1
1,4-Difluorobenzene (Surr)	103		70 - 130	12/17/21 07:30	12/17/21 12:15	1

Lab Sample ID: MB 880-15018/5-A

Matrix: Solid

Analysis Batch: 15044

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 15018

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/17/21 15:00	12/18/21 01:24	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/17/21 15:00	12/18/21 01:24	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/17/21 15:00	12/18/21 01:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/17/21 15:00	12/18/21 01:24	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/17/21 15:00	12/18/21 01:24	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/17/21 15:00	12/18/21 01:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		70 - 130	12/17/21 15:00	12/18/21 01:24	1
1,4-Difluorobenzene (Surr)	105		70 - 130	12/17/21 15:00	12/18/21 01:24	1

Lab Sample ID: LCS 880-15018/1-A

Matrix: Solid

Analysis Batch: 15044

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 15018

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07815		mg/Kg		78	70 - 130
Toluene	0.100	0.07801		mg/Kg		78	70 - 130
Ethylbenzene	0.100	0.08074		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	0.200	0.1599		mg/Kg		80	70 - 130
o-Xylene	0.100	0.08036		mg/Kg		80	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: LCSD 880-15018/2-A

Matrix: Solid

Analysis Batch: 15044

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 15018

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.07388		mg/Kg		74	70 - 130	6	35

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QC Sample Results

Client: WSP USA Inc.
Project/Site: Ross Draw 25 N

Job ID: 890-1724-1
SDG: 31403236.020.0129

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

Lab Sample ID: LCSD 880-15018/2-A

Matrix: Solid

Analysis Batch: 15044

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 15018

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene	0.100	0.08103		mg/Kg		81	70 - 130	4	35
Ethylbenzene	0.100	0.08149		mg/Kg		81	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.1570		mg/Kg		79	70 - 130	2	35
o-Xylene	0.100	0.08323		mg/Kg		83	70 - 130	4	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 880-9404-A-21-E MS

Matrix: Solid

Analysis Batch: 15044

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 15018

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.101	0.07600		mg/Kg		76	70 - 130		
Toluene	<0.00201	U	0.101	0.07954		mg/Kg		79	70 - 130		
Ethylbenzene	<0.00201	U	0.101	0.08324		mg/Kg		83	70 - 130		
m-Xylene & p-Xylene	<0.00402	U	0.201	0.1594		mg/Kg		79	70 - 130		
o-Xylene	<0.00201	U	0.101	0.07839		mg/Kg		78	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 880-9404-A-21-F MSD

Matrix: Solid

Analysis Batch: 15044

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 15018

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0990	0.07352		mg/Kg		74	70 - 130	3	35
Toluene	<0.00201	U	0.0990	0.07366		mg/Kg		74	70 - 130	8	35
Ethylbenzene	<0.00201	U	0.0990	0.08113		mg/Kg		82	70 - 130	3	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1543		mg/Kg		78	70 - 130	3	35
o-Xylene	<0.00201	U	0.0990	0.08041		mg/Kg		81	70 - 130	3	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

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

Lab Sample ID: MB 880-15090/1-A

Matrix: Solid

Analysis Batch: 15096

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 15090

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/17/21 14:20	12/20/21 12:12	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Ross Draw 25 N

Job ID: 890-1724-1
SDG: 31403236.020.0129

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

Lab Sample ID: MB 880-15090/1-A

Matrix: Solid

Analysis Batch: 15096

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 15090

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/17/21 14:20	12/20/21 12:12	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/17/21 14:20	12/20/21 12:12	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	142	S1+	70 - 130			12/17/21 14:20	12/20/21 12:12	1
o-Terphenyl	233	S1+	70 - 130			12/17/21 14:20	12/20/21 12:12	1

Lab Sample ID: LCS 880-15090/2-A

Matrix: Solid

Analysis Batch: 15096

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 15090

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	883.9		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	1000	935.7		mg/Kg		94	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	100		70 - 130				
o-Terphenyl	97		70 - 130				

Lab Sample ID: LCSD 880-15090/3-A

Matrix: Solid

Analysis Batch: 15096

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 15090

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	924.4		mg/Kg		92	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	1000	953.9		mg/Kg		95	70 - 130	2	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	110		70 - 130						
o-Terphenyl	116		70 - 130						

Lab Sample ID: 890-1727-A-21-I MS

Matrix: Solid

Analysis Batch: 15096

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 15090

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	996	1328		mg/Kg		129	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1	996	1339	F1	mg/Kg		134	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	113		70 - 130						
o-Terphenyl	98		70 - 130						

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QC Sample Results

Client: WSP USA Inc.
Project/Site: Ross Draw 25 N

Job ID: 890-1724-1
SDG: 31403236.020.0129

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

Lab Sample ID: 890-1727-A-21-J MSD

Matrix: Solid

Analysis Batch: 15096

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 15090

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	995	1392	F1	mg/Kg		136	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	995	1328	F1	mg/Kg		133	70 - 130	1	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	111		70 - 130								
o-Terphenyl	97		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-15089/1-A

Matrix: Solid

Analysis Batch: 15128

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			12/20/21 10:02	1

Lab Sample ID: LCS 880-15089/2-A

Matrix: Solid

Analysis Batch: 15128

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	265.7		mg/Kg		106	90 - 110

Lab Sample ID: LCSD 880-15089/3-A

Matrix: Solid

Analysis Batch: 15128

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	271.6		mg/Kg		109	90 - 110	2	20

Lab Sample ID: 890-1723-A-4-E MS

Matrix: Solid

Analysis Batch: 15128

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	1130		250	1377	4	mg/Kg		100	90 - 110

Lab Sample ID: 890-1723-A-4-F MSD

Matrix: Solid

Analysis Batch: 15128

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	1130		250	1372	4	mg/Kg		98	90 - 110	0	20

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Ross Draw 25 N

Job ID: 890-1724-1
SDG: 31403236.020.0129

GC VOA

Prep Batch: 14947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-14947/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 15018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1724-1	FS01	Total/NA	Solid	5035	
MB 880-15018/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-15018/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-15018/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-9404-A-21-E MS	Matrix Spike	Total/NA	Solid	5035	
880-9404-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 15044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1724-1	FS01	Total/NA	Solid	8021B	15018
MB 880-14947/5-A	Method Blank	Total/NA	Solid	8021B	14947
MB 880-15018/5-A	Method Blank	Total/NA	Solid	8021B	15018
LCS 880-15018/1-A	Lab Control Sample	Total/NA	Solid	8021B	15018
LCSD 880-15018/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	15018
880-9404-A-21-E MS	Matrix Spike	Total/NA	Solid	8021B	15018
880-9404-A-21-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	15018

Analysis Batch: 15380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1724-1	FS01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 15090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1724-1	FS01	Total/NA	Solid	8015NM Prep	
MB 880-15090/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-15090/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-15090/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1727-A-21-I MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1727-A-21-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 15096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1724-1	FS01	Total/NA	Solid	8015B NM	15090
MB 880-15090/1-A	Method Blank	Total/NA	Solid	8015B NM	15090
LCS 880-15090/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	15090
LCSD 880-15090/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	15090
890-1727-A-21-I MS	Matrix Spike	Total/NA	Solid	8015B NM	15090
890-1727-A-21-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	15090

Analysis Batch: 15468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1724-1	FS01	Total/NA	Solid	8015 NM	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Ross Draw 25 N

Job ID: 890-1724-1
SDG: 31403236.020.0129

HPLC/IC

Leach Batch: 15089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1724-1	FS01	Soluble	Solid	DI Leach	
MB 880-15089/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-15089/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-15089/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1723-A-4-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1723-A-4-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 15128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1724-1	FS01	Soluble	Solid	300.0	15089
MB 880-15089/1-A	Method Blank	Soluble	Solid	300.0	15089
LCS 880-15089/2-A	Lab Control Sample	Soluble	Solid	300.0	15089
LCSD 880-15089/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	15089
890-1723-A-4-E MS	Matrix Spike	Soluble	Solid	300.0	15089
890-1723-A-4-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	15089

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Ross Draw 25 N

Job ID: 890-1724-1
SDG: 31403236.020.0129

Client Sample ID: FS01

Lab Sample ID: 890-1724-1

Date Collected: 12/10/21 12:50

Matrix: Solid

Date Received: 12/15/21 15:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			15018	12/17/21 15:00	KL	XEN MID
Total/NA	Analysis	8021B		1	15044	12/18/21 04:16	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	15380	12/22/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	15468	12/23/21 12:30	AJ	XEN MID
Total/NA	Prep	8015NM Prep			15090	12/17/21 14:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1	15096	12/20/21 14:36	AJ	XEN MID
Soluble	Leach	DI Leach			15089	12/17/21 14:11	CA	XEN MID
Soluble	Analysis	300.0		1	15128	12/20/21 12:42	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: Ross Draw 25 N

Job ID: 890-1724-1
SDG: 31403236.020.0129

Laboratory: Eurofins Xenco, Midland

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

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

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

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

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

Method Summary

Client: WSP USA Inc.
Project/Site: Ross Draw 25 N

Job ID: 890-1724-1
SDG: 31403236.020.0129

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: Ross Draw 25 N

Job ID: 890-1724-1
SDG: 31403236.020.0129


Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1724-1	FS01	Solid	12/10/21 12:50	12/15/21 15:49	1

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

Chain of Custody



Work Order No. _____

Work Order Comments	
Program: UST/PST	<input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting Level II	<input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables: EDD	<input type="checkbox"/> ADaPT <input type="checkbox"/> Other:

ANALYSIS REQUEST						Work Order Notes
Number of Containers						Incident #: NAPP212984045 API: 30-015-45585 (ROSS) DRAW 25 36 FEDERAL COM #102H)
EPA 8015)						
EPA 0=8021)						
le (EPA 300.0)						
<div style="text-align: center;">  <p>890-1724 Chain of Custody</p> </div>						TAT starts the day received by the lab, if received by 4:30pm

[illegible]

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xencro, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xencro 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 Xencro. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xencro, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 		11/15/21 3:49	2		
3			4		
5			6		

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1724-1

SDG Number: 31403236.020.0129

Login Number: 1724

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1724-1

SDG Number: 31403236.020.0129

Login Number: 1724

List Number: 2

Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland

List Creation: 12/17/21 01:55 PM

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

District I
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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 71332

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 71332
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved. Please apply 19.15.29.13 NMAC when completing P&A at site.	3/14/2022