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	nAPP2124237477
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: WPX Energy Permian, LLC	OGRID: 246289
Contact Name: Jim Raley	Contact Telephone: 575-689-7597
Contact email: jim.raley@dvn.com	Incident # *(assigned by OCD)* nAPP2124237477
Contact mailing address: 5315 Buena Vista Dr., Carlsbad NM 88220	

Location of Release Source

Latitude 32.0492119 Longitude -103.8823973
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: TUCKER DRAW 9 4 FEDERAL COM #001H	Site Type: Oil Production Facility
Date Release Discovered: Aug 28th, 2021	API# *(if applicable) 30-015-44477*

Unit Letter	Section	Township	Range	County
B	16	26S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 5	Volume Recovered (bbls) 5
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: 4 inch nipple on water leg of treater failed, resulting in release of approx. 5 bbls of produced water to lined secondary containment. Fluids were recovered with Vac truck.

BBL Estimate = Recovered Volume

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2124237477
District RP	
Facility ID	
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

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

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

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

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

Printed Name: ____James Raley_____ Title: Environmental Specialist _____

Signature: _____ _____ Date: ___08/30/2021_____

email: ___jim.raley@dvn.com_____ Telephone: ___575-689-7597_____

OCD Only

Received by: _____ Date: _____

Incident ID	nAPP2124237477
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>101 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☑ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☑ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☑ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2124237477
District RP	
Facility ID	
Application ID	

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

Printed Name: Jim Raley Title: Environmental Professional

Signature: Date: 11/24/2021

email: jim.raley@dvn.com Telephone: 575-689-7597

OCD Only

Received by: Date:

Incident ID	nAPP2124237477
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☑ Description of remediation activities

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

Printed Name: Jim Raley Title: Environmental Professional

Signature: Date: 11/24/2021

email: jim.raley@dvn.com Telephone: 575-689-7597

OCD Only

Received by: Chad Hensley Date: 12/22/2021

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: 12/22/2021

Printed Name: Chad Hensley Title: Environmental Specialist Advanced

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

November 21, 2021

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

RE : Closure Request
WPX Energy Permian, LLC.
Tucker Draw 9 4 Federal Com #001H
Incident Number nAPP2124237477
Eddy County, New Mexico

To Whom It May Concern:

WSP USA Inc (WSP), on behalf of WPX Energy Permian, LLC. (WPX) presents the following Closure Request detailing soil sampling activities at the Tucker Draw 9 4 Federal Com #001H (Site) located in Unit B, Section 16, Township 26 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling activities was to assess the presences or absence of impacts to soil following an August 28, 2021 release of produced water. Based on the results of the soil sampling events, WPX is submitting this Closure Request, describing site assessment and delineation activities that have occurred and requesting no further action (NFA) for Incident Number nAPP2124237477.

RELEASE BACKGROUND

On August 28, 2021, a 4-inch nipple on a water leg of a treater failed and resulted in the release of approximately 5 barrels (bbls) of produced water into the lined secondary containment. A vacuum truck was immediately dispatched and recovered approximately 5 bbls of produced water from the lined secondary containment. WPX reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on August 30, 2021 and was subsequently assigned Incident Number nAPP2124237477.

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 bgs based on soil boring MW-1, associated with Ross Draw Unit (RDU) 16-25, that was drilled by Talon LPE on December 10, 2020. The soil boring is located approximately 0.61 miles southwest of the Site. Using a truck mounted drill rig equipped with hollow stem auger, the soil boring was advanced to a total depth of approximately 110 feet bgs. Groundwater was not observed within the soil boring after at least 72 hours. Following the observation period, the boring was plugged and abandoned. The boring log is included as Attachment 1.

Regionally, WPX installed six other borings in the vicinity of the Site in December 2020 ((RDX 21-43 (MW-1), RDX 17-3 (MW-1), RDX 17-44 (MW-1), RDU 55 (MW-1), RDU #38 (MW-1), and RDU 57 (MW-1)). All borings were within a 5 mile radius of the Site and depth to water results for all six indicated groundwater was not encountered within 105 feet of the ground surface. Two other water wells, United States Geological Survey (USGS) well number 320125103514701 and New Mexico Office of the State Engineer (OSE) well number C 02165, indicate depth to water has been measured in the last 25 years and the most recent data indicated groundwater levels of 117 feet and 180 feet bgs, respectively. Regionally, depth to water appears to be greater than 100 feet bgs and therefore the depth to water estimate for the Site appears to be consistent with the regional data, thus a representative water well for estimating depth to water for the Site. Figure 1 depicts the nine water wells described above.

The closest continuously flowing or significant watercourse to the Site is an intermittent streambed located approximately 1,069 feet south of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a medium-potential karst area. Potential receptors identified during Site Characterization are displayed in Figure 1.

CLOSURE CRITERIA

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

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg

- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

LINER INSPECTION

On September 3, 2021, WSP personnel visited the Site to visually inspect the lined secondary containment for any signs of holes or tears that would act as a conduit to subsurface soil. The subsequent visual inspection of liner integrity determined the liner was not in working condition. Based on the site assessment and visual observations, delineation activities were warranted to investigate potential soil impacts. WPX is scheduled to patch the impaired liner following assessment activities provided by WSP. Photographic documentation during the liner inspection is included as Attachment 2.

DELINEATION SOIL SAMPLING ACTIVITIES

On October 28, 2021, WSP personnel conducted delineation activities to confirm the presence or absence of impacted soils as a result of the impaired liner. Utilizing a hand auger, WSP installed one delineation soil sample within the breach area (BH01) to determine the vertical extent of potential impacts and six delineation soil samples (BH02 through BH07) outside of the containment to investigate lithology and confirm lateral delineation. Delineation activities were directed by field screening soil samples for volatile aromatic hydrocarbons using a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. A total of two soil samples were collected from each of the borehole locations: the sample with the highest observed field screening concentrations (approximately 1 to 3 feet bgs) and the greatest depth (approximately 5 feet bgs). The delineation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler initials, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C), under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Euorfins) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH following EPA Method 8015M/D; and chloride following EPA Method 300.0. The delineation sample locations were mapped utilizing a handheld GPS unit and are presented on Figure 2. Field screening results and observations for the boreholes were recorded on lithologic/soil sampling logs and are presented in Attachment 3.

ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in all delineation soil samples and at both depths. Limited chloride was detected at approximately 1 foot bgs within the breach area (BH01); however, the concentration was in compliance with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the laboratory analytical report is included as Attachment 4.

CLOSURE REQUEST

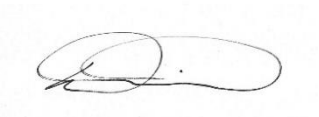
WSP personnel advanced seven boreholes (BH01 through BH07) within and around the release extent to a total depth of approximately 5 feet bgs in order to assess the presence or absence of soil impacts resulting from the August 28, 2021 produced water release. Laboratory analytical results for all delineation soil samples indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Additionally, lateral and vertical definition of the release is below the most stringent Closure Criteria.

While chloride was present within the breached area of the liner (BH01), the concentration was in compliance with the Closure Criteria. In addition, WPX is scheduling repairs to the impaired liner to help prevent future releases to the ground surface and act as a barrier for surface infiltration of precipitation that might mobilize and vertically migrate residual chloride in soil beneath the secondary containment. Assessment and delineation activities have confirmed the absence of impacts to the subsurface resulting from the August 2021 release and efforts to mitigate the release, including the removal of free-standing fluid via a hydrovac, has been protective of human health, the environment, and groundwater. As such, WPX is requesting NFA of Incident Number nAPP2124237477.

If you have any questions or comments, please do not hesitate to contact Mr. Daniel R. Moir at (303) 887-2946.

Sincerely,

WSP USA Inc.



Joseph S. Hernandez
Associate Consultant, Geologist

Daniel R. Moir, P.G.
Lead Consultant, Geologist

cc: Jim Raley, Devon
Bureau of Land Management

Attachments:

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

FIGURES

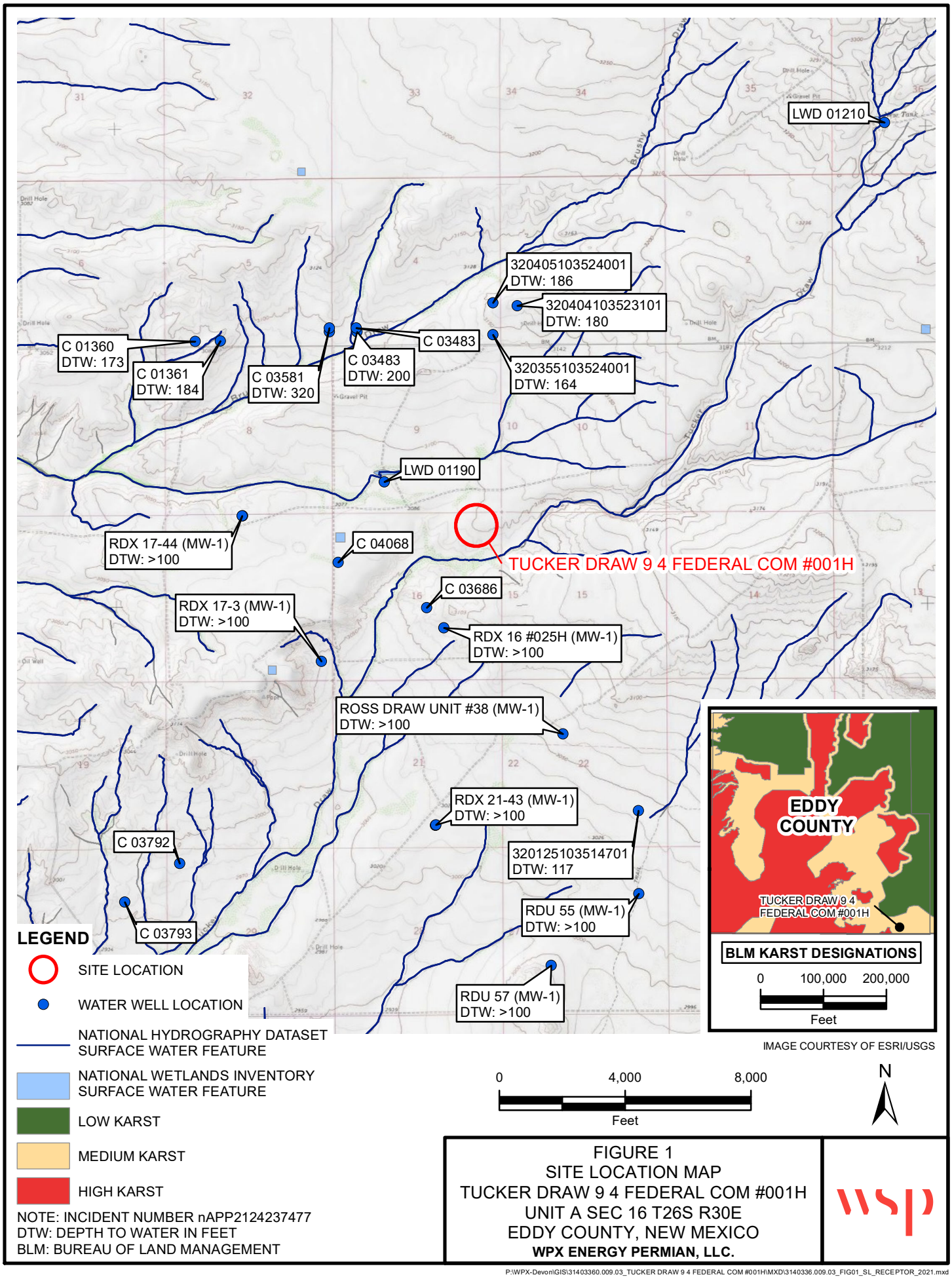


FIGURE 1
SITE LOCATION MAP
TUCKER DRAW 9 4 FEDERAL COM #001H
UNIT A SEC 16 T26S R30E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

P:\WPX-Devon\GIS\31403360.009.03_TUCKER DRAW 9 4 FEDERAL COM #001H\MXD\3140336.009.03_FIG01_SL_RECEPTOR_2021.mxd

LEGEND

IMAGE COURTESY OF ESRI

DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

0 100 200

Feet

N

NOTE: INCIDENT NUMBER nAPP2124237477
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
TUCKER DRAW 9 4 FEDERAL COM #001H
UNIT A SEC 16 T26S R30E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC

P:\WPX-Devon\GIS\31403360.009.03_TUCKER DRAW 9 4 FEDERAL COM #001H\MXD\31403360.009.03_FIG02_DELINEATION_2021.mxd

TABLES

Table 1

Soil Analytical Results
Tucker Draw 9 4 Federal Com #001H
Incident Number nAPP2124237477
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
Delineation Samples										
BH01	10/28/2021	1	<0.00199	<0.00398	298	<49.9	<49.9	298	298	3,860
BH01	10/28/2021	5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	369
BH02	10/28/2021	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	351
BH02	10/28/2021	5	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	43.3
BH03	10/28/2021	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	299
BH03	10/28/2021	5	<0.00200	<0.00400	<49.8	<49.8	<49.8	<49.8	<49.8	88.3
BH04	10/28/2021	2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	186
BH04	10/28/2021	5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	46.9
BH05	10/28/2021	3	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	40.2
BH05	10/28/2021	5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	88.0
BH06	10/28/2021	1	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	65.1
BH06	10/28/2021	5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	14.0
BH07	10/28/2021	3	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	28.4
BH07	10/28/2021	5	<0.00198	<0.00396	<49.8	<49.8	<49.8	<49.8	<49.8	14.8

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

ATTACHMENT 1: REFERENCED WELL RECORD

HRL COMPLIANCE SOLUTIONS

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW-1		Location: RDX 16-25	
Date: 12/10/2020		Client: WPX Energy	
Drilling Method: Air Rotary	Sampling Method: None	Logged By: J. Linn, PG	Drilled By: Talon LPE
Gravel Pack Type: 10/20 sand	Gravel Pack Depth Interval: 3 bags	Seal Type: None / Seal Depth Interval: None	Latitude: 32.0399004
Casing Type: PVC / Diameter: 2-inch / Depth Interval: 0-105 feet bgs		Boring Total Depth (ft. BGS): 110	Longitude: -103.8833368
Screen Type: PVC / Slot: 0.010-inch / Diameter: 2-inch / Depth Interval: 105-110 ft		Well Total Depth (ft. BGS): 110	Depth to Water (ft. BTOC): > 110 / DTW Date: 12/16/2020

Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Lithology/Remarks	Well Completion
0	NM	L	D	N	N	NM	SW	NS	Pale orange to pink tan well graded sand with silt	
5										
10										
15										
20										
25	NM	L	D	N	N	NM	SP	NS	Pale pinky orange poorly graded fine sand	
30										
35										
40	NM	L	D	N	N	NM	SW	NS	Orange to pale red well graded sand with gravel	
45										
50	NM	L	D	N	N	NM	SP	NS	Pale pinky orange poorly graded fine sand	
55										
60	NM	L	D	N	N	NM	SP	NS	Pale pinky orange poorly graded fine sand with minor medium and coarse sand - TD: 110' bgs	
65										
70										
75										
80										
85										
90										
95										
100										
105										
110										

HRL COMPLIANCE SOLUTIONS

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW-1		Location: Ross Draw Unit #38	
Date: 12/8/2020		Client: WPX Energy	
Drilling Method: Air Rotary	Sampling Method: None	Logged By: J. Linn, PG	Drilled By: Talon LPE
Gravel Pack Type: 10/20 Sand	Gravel Pack Depth Interval: 3 Bags	Seal Type: None / Seal Depth Interval: None	Latitude: 32.030300
Casing Type: PVC / Diameter: 2-inch / Depth Interval: 0-100 feet bgs		Boring Total Depth (ft. BGS): 105	Longitude: -103.871338
Screen Type: PVC / Slot: 0.010-inch / Diameter: 2-inch / Depth Interval: 100-105 ft		Well Total Depth (ft. BGS): 105	Depth to Water (ft. BTOC): > 105 / DTW Date: 12/16/2020

Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Lithology/Remarks	Well Completion
0	NM	L	D	N	N	NM	SW	NS	Pale orange/pale pink to buff colored fine sand with minor medium and coarse sand	
5										
10										
15										
20	NM	L	D	N	N	NM	SP	NS	Pale orange/pale pink poorly graded fine sand	
25										
30										
35	NM	L	D	N	N	NM	SP	NS	Tan/pale brown/pale orange poorly graded fine sand	
40										
45										
50										
55										
60										
65										
70	NM	L	D	N	N	NM	SP	NS	Brick red brown poorly graded fine sand	
75										
80										
85										
90										
95										
100	NM	L	D	N	N	NM	SP	NS	Tan/pale brown/pale orange poorly graded fine sand - TD 105' BGS	

HRL COMPLIANCE SOLUTIONS

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW-1		Location: RDX Federal Com 21-43	
Date: 12/9/2020		Client: WPX Energy	
Drilling Method: Air Rotary	Sampling Method: None	Logged By: J. Linn, P.G.	Drilled By: Talon LPE
Gravel Pack Type: 10/20 Sand	Gravel Pack Depth Interval: 3 Bags	Seal Type: None / Seal Depth Interval: None	Latitude: 32.022571
Casing Type: PVC / Diameter: 2-inch / Depth Interval: 0-100 feet bgs		Boring Total Depth (ft. BGS): 110	Longitude: -103.884371
Screen Type: PVC / Slot: 0.010-inch / Diameter: 2-inch / Depth Interval: 100 - 105 ft		Well Total Depth (ft. BGS): 105	Depth to Water (ft. BTOC): > 105 / DTW Date: 12/16/2020

Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Lithology/Remarks	Well Completion
0	NM	L	D	N	N	NM	SP	NS	Pale orange to tan poorly graded fine sand	
5										
10										
15										
20	NM	H	D	N	N	NM	CL	NS	Pale orange/tan/pale red clay, dry, with silt, fine sand, and minor caliche	
25	NM	L	D	N	N	NM	SP	NS	Pale orange to pale red poorly graded fine sand	
30										
35										
40										
45										
50	NM	L	D	N	N	NM	SP	NS	Golden yellow poorly graded fine sand with minor silt and clay	
55										
60										
65	NM	L	D	N	N	NM	SP	NS	Pale orange to pale red poorly graded fine sand with minor silt/clay	
70										
75										
80	NM	M	D	N	N	NM	SC	NS	Buff to orange color fine sand with medium sand and clay	
85										
90										
95	NM	H	D	N	N	NM	CL	NS	Brown orange clay with silt and fine sand	
100	NM	H	D	N	N	NM	SC	NS	Golden yellow and buff colored clay with fine sand - TD Boring: 110' BGS; Sand 110' - 105' BGS	
105										

HRL COMPLIANCE SOLUTIONS

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW-1		Location: RDX 17 #3	
Date: 12/8/2020		Client: WPX Energy	
Drilling Method: Air Rotary	Sampling Method: None	Logged By: J. Linn, PG	Drilled By: Talon LPE
Gravel Pack Type: 10/20 Sand	Gravel Pack Depth Interval: 3 Bags	Seal Type: None / Seal Depth Interval: None	Latitude: 32.036765
Casing Type: PVC / Diameter: 2-inch / Depth Interval: 0-102 feet bgs		Boring Total Depth (ft. BGS): 107	Longitude: -103.895993
Screen Type: PVC / Slot: 0.010-inch / Diameter: 2-inch / Depth Interval: 102-107 ft		Well Total Depth (ft. BGS): 107	Depth to Water (ft. BTOC): > 107 / DTW Date: 12/16/2020

Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Lithology/Remarks	Well Completion
0	NM	L	D	N	N	NM	SP	NS	Pale orange poorly graded fine sand	
5										
10										
15										
20										
25										
30	NM	L	D	N	N	NM	SP	NS	Same as above with slight increase in coarse sand and gravel	
35										
40	NM	L	D	N	N	NM	SP	NS	Pale orange poorly graded fine sand with very slight silt	
45										
50										
55	NM	L	D	N	N	NM	SP	NS	Pale orange poorly graded fine sand	
60	NM	L	D	N	N	NM	SW	NS	Pale orange well graded fine sand	
65	NM	M	SL M	N	N	NM	SM	NS	Pale red orange clayey silty fine sand with minor coarse sand and gravel	
70										
75										
80										
85										
90	NM	L	SL M	N	N	NM	SP	NS	Pale orange poorly sorted fine sand - TD 107' BGS	
95										
100										
105										

HRL COMPLIANCE SOLUTIONS

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW-1			Location: RDX Federal Com 17-44H
Date: 12/8/2020			Client: WPX Energy
Drilling Method: Air Rotary	Sampling Method: None	Logged By: J. Linn, PG	Drilled By: Talon LPE
Gravel Pack Type: 10/20 Sand	Gravel Pack Depth Interval: 3 Bags	Seal Type: None	Seal Depth Interval: None	Latitude: 32.049656
Casing Type: PVC / Diameter: 2-inch / Depth Interval: 0-105 ft bgs		Boring Total Depth (ft. BGS): 110		Longitude: -103.904054
Screen Type: PVC / Slot: 0.010-inch / Diameter: 2-inch / Depth Interval: 105 - 110 ft		Well Total Depth (ft. BGS): 110		Depth to Water (ft. BTOC): > 110	DTW Date: 12/16/2020

Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Lithology/Remarks	Well Completion
0	NM	L	D	N	N	NM	CE	NS	Buff to pale pink colored caliche	
5										
10										
15										
20										
25										
30										
35										
40										
45	NM	L	D	N	N	NM	SW	NS	Pinky orange well graded sand with minor silt	
50										
55										
60										
65	NM	L	D	N	N	NM	SP	NS	Pinky pale brown orange poorly graded fine sand with minor silt	
70										
75										
80	NM	L	D	N	N	NM	SW-SM SW-SC	NS	Pinky brown orange well-graded sand with silt and clay	
85										
90										
95	NM	L	D	N	N	NM	SP	NS	Pinky pale brown orange poorly graded fine sand with minor silt - TD: 110' bgs	
100										
105										

HRL COMPLIANCE SOLUTIONS

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW-1		Location: Ross Draw Unit #55	
Date: 12/9/2020		Client: WPX Energy	
Drilling Method: Air Rotary	Sampling Method: None	Logged By: J. Linn, PG	Drilled By: Talon LPE
Gravel Pack Type: 10/20 Sand	Gravel Pack Depth Interval: 3 Bags	Seal Type: None / Seal Depth Interval: None	Latitude: 32.016165
Casing Type: PVC / Diameter: 2-inch / Depth Interval: 0-101'7"		Boring Total Depth (ft. BGS): 106'7"	Longitude: -103.86346
Screen Type: PVC / Slot: 0.010-inch / Diameter: 2-inch / Depth Interval: 101'7" - 106'7"		Well Total Depth (ft. BGS): 106'7"	Depth to Water (ft. BTOC): >106' 7" / DTW Date: 12/16/2020

Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Lithology/Remarks	Well Completion
0	NM	L	D	N	N	NM	SP	NS	Pale pink to buff colored poorly graded sand with minor silt	
5										
10										
15										
20	NM	L	D	N	N	NM	SW	NS	Pale tan orange well graded fine sand with minor medium and coarse sand	
25										
30										
35	NM	L	D	N	N	NM	SP	NS	Pale orange brown poorly graded fine sand with minor gravel	
40										
45										
50										
55										
60										
65	NM	L	D	N	N	NM	SP	NS	Grey poorly graded fine sand with minor gravel	
70										
75										
80										
85										
90	NM	L	D	N	N	NM	SP	NS	Darker grey poorly graded fine sand with minor silt and minor medium sand	
95										
100	NM	M	D	N	N	NM	SC	NS	Dark grey fine sand with moderate silt and clay - TD 106'7"	
106'7"										

HRL COMPLIANCE SOLUTIONS

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW-1		Location: Ross Draw Unit #57	
Date: 12/9/2020		Client: WPX Energy	
Drilling Method: Air Rotary	Sampling Method: None	Logged By: J. Linn, PG	Drilled By: Talon LPE
Gravel Pack Type: 10/20 Sand	Gravel Pack Depth Interval: 3 Bags	Seal Type: None / Seal Depth Interval: None	Latitude: 32.01032
Casing Type: PVC / Diameter: 2-inch / Depth Interval: 0-105 feet bgs		Boring Total Depth (ft. BGS): 110	Longitude: -103.87246
Screen Type: PVC / Slot: 0.010-inch / Diameter: 2-inch / Depth Interval: 105-110 ft		Well Total Depth (ft. BGS): 110	Depth to Water (ft. BTOC): > 110 / DTW Date: 12/16/2020

Depth Interval (ft)	Recovery (ft)	Plasticity	Moisture	Odor	Staining	PID (ppm)	USCS	Sample ID	Lithology/Remarks	Well Completion
0	NM	L/M	D	N	N	NM	SM	NS	Tan/pale orange/pale brown poorly graded fine sand	
5										
10										
15										
20										
25										
30										
35										
40	NM	M	D	N	N	NM	SW	NS	Hard, dry pale pink orange well graded sand with gravel	
45										
50	NM	M	D	N	N	NM	SM	NS	Pale orange red tan silty fine sand	
55										
60	NM	L	D	N	N	NM	SW	NS	Dark brown greyish well graded sand	
65										
70	NM	L/M	D to SL M	N	N	NM	SW	NS	Grey well graded sand	
75										
80										
85										
90										
95										
100	NM	L/M	D	N	N	NM	SM	NS	Tan/pale orange/pale brown poorly graded fine sand - TD 110' bgs	
105										

ATTACHMENT 2: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG		
WPX Energy Permian, LLC.	Tucker Draw 9 4 Federal Com #001H Eddy County, NM	NAPP2124237477

Photo No.	Date
1	September 3 2021

View of the Site during the liner inspection – breached area.

ATTACHMENT 3: LITHOLOGIC/SOIL SAMPLING LOG

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: BH01	Date: 10/28/2021
Site Name: Tucker Draw 9 4 Federal Com # 001H	
RP or Incident Number: NAPP2124237477	
WSP Job Number: 31403360.009	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: EL	Method: Hand auger & Core Drill		
Lat/Long: 32.048765, -103.879797	Field Screening: Hach chloride strips, PID	Hole Diameter: 3 inches	Total Depth: 5 feet bgs

M-moist; D-dry; Y-yes; N-no

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	7,213	63.7	Y		0.5	0.5	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, SILTY, ABUNDANT CALICHE GRAVEL, ODOR PRESENT.
M	4,441	69.0	N	BH01	1	1	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, SILTY, ABUNDANT CALICHE GRAVEL, ODOR PRESENT.
M	3,164	16.2	N		2	2	SM	SAND, BROWN, FINE GRAIN, WELL GRADED, SILTY, ABUNDAN CALICHE GRAVEL, ODOR PRESENT.
M	1,904	24.2	N		3	3	SM	SAND, BROWN, FINE GRAIN, WELL GRADED, SILTY, ABUNDAN CALICHE GRAVEL, NO ODOR.
M	1,697	65.1	N		4	4	SM	SAND, BROWN, FINE GRAIN, WELL GRADED, SILTY, ABUNDAN CALICHE GRAVEL, ODOR PRESENT.
M	476	4.3	N	BH01	5	5	SM	SAND, REDDISH BROWN, FINE GRAIN, WELL GRADED, SOME CALICHE GRAVEL, SOME SILT, ODOR PRESENT

TD @ 5 ft bgs

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH or PH Name: BH02	Date: 10/28/2021
	Site Name: Tucker Draw 9 4 Federal Com # 001H	
	RP or Incident Number: NAPP2124237477	
	WSP Job Number: 31403360.009	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: EL	Method: Hand auger & Core Drill
Lat/Long: 32.048949, -103.879935	Field Screening: Hach chloride strips, PID	Hole Diameter: 3 inches / Total Depth: 5 feet bgs

M-moist; D-dry; Y-yes; N-no

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	394.8	0.4	N	BH02	1	1	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR
M	<179.2	0.4	N		2	2	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR
M	<179.2	0.4	N		3	3	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR
M	<179.2	0.5	N		4	4	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR
M	<179.2	0.4	N	BH02	5	5	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR

TD @ 5 ft bgs

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH or PH Name: BH03	Date: 10/28/2021
	Site Name: Tucker Draw 9 4 Federal Com # 001H	
	RP or Incident Number: NAPP2124237477	
	WSP Job Number: 31403360.009	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: EL	Method: Hand auger & Core Drill
Lat/Long: 32.048954, -103.880130	Field Screening: Hach chloride strips, PID	Hole Diameter: 3 inches / Total Depth: 5 feet bgs

M-moist; D-dry; Y-yes; N-no

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	319.2	0.3	N	BH03	1	1	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, SILTY, ABUNDANT CALICHE GRAVEL, NO ODOR
M	179.2	0.3	N		2	2	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR
M	<179.2	0.3	N		3	3	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR
M	<179.2	0.5	N		4	4	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR
M	<179.2	0.5	N	BH03	5	5	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR

TD @ 5 ft bgs

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH or PH Name: BH04	Date: 10/28/2021
	Site Name: Tucker Draw 9 4 Federal Com # 001H	
	RP or Incident Number: NAPP2124237477	
	WSP Job Number: 31403360.009	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: EL	Method: Hand auger & Core Drill
Lat/Long: 32.048757, -103.880277	Field Screening: Hach chloride strips, PID	Hole Diameter: 3 inches / Total Depth: 5 feet bgs

M-moist; D-dry; Y-yes; N-no

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	<179.2	0.3	N		1	1	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, SILTY, ABUNDANT CALICHE GRAVEL, NO ODOR
M	257.2	0.3	N	BH04	2	2	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR
M	<179.2	0.3	N		3	3	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR
M	<179.2	0.3	N		4	4	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR
M	<179.2	0.3	N	BH04	5	5	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR

TD @ 5 ft bgs

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH or PH Name: BH05	Date: 10/28/2021
	Site Name: Tucker Draw 9 4 Federal Com # 001H	
	RP or Incident Number: NAPP2124237477	
	WSP Job Number: 31403360.009	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: EL	Method: Hand auger & Core Drill
Lat/Long: 32.048656, -103.880125	Field Screening: Hach chloride strips, PID	Hole Diameter: 3 inches / Total Depth: 5 feet bgs

M-moist; D-dry; Y-yes; N-no

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	<179.2	0.3	N		1	1	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, SILTY, ABUNDANT CALICHE GRAVEL, NO ODOR
M	<179.2	0.3	N		2	2	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, SILTY, ABUNDANT CALICHE GRAVEL, NO ODOR
M	319.2	0.3	N	BH05	3	3	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, SILTY, ABUNDANT CALICHE GRAVEL, NO ODOR
M	<179.2	0.3	N		4	4	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, SILTY, ABUNDANT CALICHE GRAVEL, NO ODOR
M	<179.2	0.4	N	BH05	5	5	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR

TD @ 5 ft bgs

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH or PH Name: BH06	Date: 10/28/2021
	Site Name: Tucker Draw 9 4 Federal Com # 001H	
	RP or Incident Number: NAPP2124237477	
	WSP Job Number: 31403360.009	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: EL	Method: Hand auger & Core Drill
Lat/Long: 32.048649, -103.879924	Field Screening: Hach chloride strips, PID	Hole Diameter: 3 inches / Total Depth: 5 feet bgs

M-moist; D-dry; Y-yes; N-no

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	644.0	0.4	N	BH06	1	1	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, SILTY, ABUNDANT CALICHE GRAVEL, NO ODOR
M	<179.2	0.4	N		2	2	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR
M	<179.2	0.5	N		3	3	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR
M	<179.2	0.4	N		4	4	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR
M	644.0	0.5	N	BH06	5	5	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR

TD @ 5 ft bgs

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH or PH Name: BH07	Date: 10/28/2021
	Site Name: Tucker Draw 9 4 Federal Com # 001H	
	RP or Incident Number: NAPP2124237477	
	WSP Job Number: 31403360.009	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: EL	Method: Hand auger & Core Drill
Lat/Long: 32.048717, -103.879718	Field Screening: Hach chloride strips, PID	Hole Diameter: 3 inches / Total Depth: 5 feet bgs

M-moist; D-dry; Y-yes; N-no

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	<179.2	0.3	N		1	1	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, SILTY, ABUNDANT CALICHE GRAVEL, NO ODOR
M	<179.2	0.4	N		2	2	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR
M	<179.2	0.3	N	BH07	3	3	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR
M	<179.2	0.4	N		4	4	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR
M	<179.2	0.4	N	BH07	5	5	SM	SAND, BROWN, FINE - MEDIUM GRAIN, WELL GRADED, ABUNDANT CALICHE GRAVEL, ABUNDANT AGGREGATE GRAVEL, SOME SILT, NO ODOR

TD @ 5 ft bgs

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-1503-1
Laboratory Sample Delivery Group: 31403360.009
Client Project/Site: Tucker Draw

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

Attn: Joseph Hernandez

Authorized for release by:
11/9/2021 7:56:14 PM

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

Client: WSP USA Inc.
Project/Site: Tucker Draw

Laboratory Job ID: 890-1503-1
SDG: 31403360.009

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1503-1
Project/Site: Tucker Draw SDG: 31403360.009

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc. Job ID: 890-1503-1
Project/Site: Tucker Draw SDG: 31403360.009

Job ID: 890-1503-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1503-1

Receipt
The samples were received on 10/29/2021 1:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.2°C

GC VOA
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: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

Client Sample ID: BH01B

Lab Sample ID: 890-1503-1
Matrix: Solid
Date Collected: 10/28/21 10:45
Date Received: 10/29/21 13:00
Sample Depth: 7

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		11/03/21 09:17	11/03/21 12:47	1
Toluene	<0.00202	U	0.00202		mg/Kg		11/03/21 09:17	11/03/21 12:47	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		11/03/21 09:17	11/03/21 12:47	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		11/03/21 09:17	11/03/21 12:47	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		11/03/21 09:17	11/03/21 12:47	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		11/03/21 09:17	11/03/21 12:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*11/03/21 09:17*	*11/03/21 12:47*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*11/03/21 09:17*	*11/03/21 12:47*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			11/01/21 14:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/03/21 08:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/01/21 14:48	11/03/21 03:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/01/21 14:48	11/03/21 03:43	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/01/21 14:48	11/03/21 03:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*11/01/21 14:48*	*11/03/21 03:43*	*1*
o-Terphenyl	*109*		*70 - 130*	*11/01/21 14:48*	*11/03/21 03:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**240**		5.00		mg/Kg			11/03/21 13:54	1

Client Sample ID: BH02B

Lab Sample ID: 890-1503-2
Matrix: Solid
Date Collected: 10/28/21 11:50
Date Received: 10/29/21 13:00
Sample Depth: 7

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/03/21 09:17	11/03/21 13:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/03/21 09:17	11/03/21 13:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/03/21 09:17	11/03/21 13:09	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/03/21 09:17	11/03/21 13:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/03/21 09:17	11/03/21 13:09	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/03/21 09:17	11/03/21 13:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*11/03/21 09:17*	*11/03/21 13:09*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

Client Sample ID: BH02B

Date Collected: 10/28/21 11:50
Date Received: 10/29/21 13:00
Sample Depth: 7

Lab Sample ID: 890-1503-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*11/03/21 09:17*	*11/03/21 13:09*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/03/21 08:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/01/21 14:48	11/03/21 04:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/01/21 14:48	11/03/21 04:05	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/01/21 14:48	11/03/21 04:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*11/01/21 14:48*	*11/03/21 04:05*	*1*
o-Terphenyl	*119*		*70 - 130*	*11/01/21 14:48*	*11/03/21 04:05*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**67.3**		4.98		mg/Kg			11/09/21 00:40	1

Client Sample ID: BH03B

Date Collected: 10/28/21 12:35
Date Received: 10/29/21 13:00
Sample Depth: 7

Lab Sample ID: 890-1503-3

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/03/21 09:17	11/03/21 13:29	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/03/21 09:17	11/03/21 13:29	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/03/21 09:17	11/03/21 13:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/03/21 09:17	11/03/21 13:29	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/03/21 09:17	11/03/21 13:29	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/03/21 09:17	11/03/21 13:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*11/03/21 09:17*	*11/03/21 13:29*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*11/03/21 09:17*	*11/03/21 13:29*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			11/03/21 08:46	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

Client Sample ID: BH03B

Lab Sample ID: 890-1503-3
Matrix: Solid
Date Collected: 10/28/21 12:35
Date Received: 10/29/21 13:00
Sample Depth: 7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		11/01/21 14:48	11/03/21 04:28	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		11/01/21 14:48	11/03/21 04:28	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		11/01/21 14:48	11/03/21 04:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*11/01/21 14:48*	*11/03/21 04:28*	*1*
o-Terphenyl	*119*		*70 - 130*	*11/01/21 14:48*	*11/03/21 04:28*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**60.5**		4.95		mg/Kg			11/09/21 00:47	1

Client Sample ID: BH04B

Lab Sample ID: 890-1503-4
Matrix: Solid
Date Collected: 10/28/21 13:35
Date Received: 10/29/21 13:00
Sample Depth: 7

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		11/03/21 09:17	11/03/21 13:50	1
Toluene	<0.00198	U	0.00198		mg/Kg		11/03/21 09:17	11/03/21 13:50	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		11/03/21 09:17	11/03/21 13:50	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		11/03/21 09:17	11/03/21 13:50	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		11/03/21 09:17	11/03/21 13:50	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		11/03/21 09:17	11/03/21 13:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*11/03/21 09:17*	*11/03/21 13:50*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*11/03/21 09:17*	*11/03/21 13:50*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/03/21 08:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/01/21 14:48	11/03/21 04:50	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/01/21 14:48	11/03/21 04:50	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/01/21 14:48	11/03/21 04:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*11/01/21 14:48*	*11/03/21 04:50*	*1*
o-Terphenyl	*102*		*70 - 130*	*11/01/21 14:48*	*11/03/21 04:50*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

Client Sample ID: BH04B

Lab Sample ID: 890-1503-4
Matrix: Solid
Date Collected: 10/28/21 13:35
Date Received: 10/29/21 13:00
Sample Depth: 7

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	44.5		4.97		mg/Kg			11/09/21 01:09	1

Client Sample ID: BH05B

Lab Sample ID: 890-1503-5
Matrix: Solid
Date Collected: 10/28/21 14:32
Date Received: 10/29/21 13:00
Sample Depth: 7

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/03/21 09:17	11/03/21 14:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/03/21 09:17	11/03/21 14:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/03/21 09:17	11/03/21 14:10	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		11/03/21 09:17	11/03/21 14:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/03/21 09:17	11/03/21 14:10	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		11/03/21 09:17	11/03/21 14:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*11/03/21 09:17*	*11/03/21 14:10*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*11/03/21 09:17*	*11/03/21 14:10*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/03/21 08:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/01/21 14:48	11/03/21 05:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/01/21 14:48	11/03/21 05:12	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/01/21 14:48	11/03/21 05:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*11/01/21 14:48*	*11/03/21 05:12*	*1*
o-Terphenyl	*116*		*70 - 130*	*11/01/21 14:48*	*11/03/21 05:12*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	103		4.96		mg/Kg			11/09/21 01:16	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

Client Sample ID: BH06B

Lab Sample ID: 890-1503-6
Matrix: Solid
Date Collected: 10/28/21 15:25
Date Received: 10/29/21 13:00
Sample Depth: 7

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/03/21 09:17	11/03/21 14:30	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/03/21 09:17	11/03/21 14:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/03/21 09:17	11/03/21 14:30	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/03/21 09:17	11/03/21 14:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/03/21 09:17	11/03/21 14:30	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/03/21 09:17	11/03/21 14:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*11/03/21 09:17*	*11/03/21 14:30*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*11/03/21 09:17*	*11/03/21 14:30*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/03/21 08:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/01/21 14:48	11/03/21 05:35	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/01/21 14:48	11/03/21 05:35	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/01/21 14:48	11/03/21 05:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*11/01/21 14:48*	*11/03/21 05:35*	*1*
o-Terphenyl	*125*		*70 - 130*	*11/01/21 14:48*	*11/03/21 05:35*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**17.8**		5.00		mg/Kg			11/09/21 01:24	1

Client Sample ID: BH07B

Lab Sample ID: 890-1503-7
Matrix: Solid
Date Collected: 10/28/21 16:10
Date Received: 10/29/21 13:00
Sample Depth: 7

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/03/21 09:17	11/03/21 17:34	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/03/21 09:17	11/03/21 17:34	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/03/21 09:17	11/03/21 17:34	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/03/21 09:17	11/03/21 17:34	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/03/21 09:17	11/03/21 17:34	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/03/21 09:17	11/03/21 17:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*11/03/21 09:17*	*11/03/21 17:34*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

Client Sample ID: BH07B
Date Collected: 10/28/21 16:10
Date Received: 10/29/21 13:00
Sample Depth: 7

Lab Sample ID: 890-1503-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*11/03/21 09:17*	*11/03/21 17:34*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			11/03/21 08:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		11/01/21 14:48	11/03/21 05:57	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		11/01/21 14:48	11/03/21 05:57	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		11/01/21 14:48	11/03/21 05:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*11/01/21 14:48*	*11/03/21 05:57*	*1*
o-Terphenyl	*109*		*70 - 130*	*11/01/21 14:48*	*11/03/21 05:57*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**16.4**		4.99		mg/Kg			11/09/21 01:31	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-1503-1	BH01B	117	97
890-1503-1 MS	BH01B	109	100
890-1503-1 MSD	BH01B	105	103
890-1503-2	BH02B	122	98
890-1503-3	BH03B	127	75
890-1503-4	BH04B	125	83
890-1503-5	BH05B	120	93
890-1503-6	BH06B	127	98
890-1503-7	BH07B	120	101
LCS 880-11348/1-A	Lab Control Sample	106	103
LCSD 880-11348/2-A	Lab Control Sample Dup	107	103
MB 880-11348/5-A	Method Blank	112	97

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-1495-A-1-H MS	Matrix Spike	99	99
890-1495-A-1-I MSD	Matrix Spike Duplicate	102	115
890-1503-1	BH01B	98	109
890-1503-2	BH02B	109	119
890-1503-3	BH03B	111	119
890-1503-4	BH04B	97	102
890-1503-5	BH05B	108	116
890-1503-6	BH06B	116	125
890-1503-7	BH07B	98	109
LCS 880-11158/2-A	Lab Control Sample	101	104
LCSD 880-11158/3-A	Lab Control Sample Dup	90	95
MB 880-11158/1-A	Method Blank	103	114

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-11348/5-A
Matrix: Solid
Analysis Batch: 11347

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11348

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/03/21 09:17	11/03/21 12:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/03/21 09:17	11/03/21 12:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/03/21 09:17	11/03/21 12:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/03/21 09:17	11/03/21 12:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/03/21 09:17	11/03/21 12:28	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/03/21 09:17	11/03/21 12:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*11/03/21 09:17*	*11/03/21 12:28*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*11/03/21 09:17*	*11/03/21 12:28*	*1*

Lab Sample ID: LCS 880-11348/1-A
Matrix: Solid
Analysis Batch: 11347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11348

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.08441		mg/Kg		84	70 - 130
Toluene	0.100	0.07901		mg/Kg		79	70 - 130
Ethylbenzene	0.100	0.07884		mg/Kg		79	70 - 130
m-Xylene & p-Xylene	0.200	0.1626		mg/Kg		81	70 - 130
o-Xylene	0.100	0.08190		mg/Kg		82	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-11348/2-A
Matrix: Solid
Analysis Batch: 11347

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11348

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.08773		mg/Kg		88	70 - 130	4	35
Toluene	0.100	0.08113		mg/Kg		81	70 - 130	3	35
Ethylbenzene	0.100	0.08209		mg/Kg		82	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.1703		mg/Kg		85	70 - 130	5	35
o-Xylene	0.100	0.08558		mg/Kg		86	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-1503-1 MS
Matrix: Solid
Analysis Batch: 11347

Client Sample ID: BH01B
Prep Type: Total/NA
Prep Batch: 11348

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00202	U	0.0996	0.08222		mg/Kg		83	70 - 130
Toluene	<0.00202	U	0.0996	0.07694		mg/Kg		77	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

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

Lab Sample ID: 890-1503-1 MS
Matrix: Solid
Analysis Batch: 11347

Client Sample ID: BH01B
Prep Type: Total/NA
Prep Batch: 11348

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00202	U	0.0996	0.07831		mg/Kg		79	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1614		mg/Kg		81	70 - 130
o-Xylene	<0.00202	U	0.0996	0.08164		mg/Kg		82	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-1503-1 MSD
Matrix: Solid
Analysis Batch: 11347

Client Sample ID: BH01B
Prep Type: Total/NA
Prep Batch: 11348

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0994	0.09224		mg/Kg		93	70 - 130	11	35
Toluene	<0.00202	U	0.0994	0.08703		mg/Kg		88	70 - 130	12	35
Ethylbenzene	<0.00202	U	0.0994	0.08669		mg/Kg		87	70 - 130	10	35
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1801		mg/Kg		91	70 - 130	11	35
o-Xylene	<0.00202	U	0.0994	0.09061		mg/Kg		91	70 - 130	10	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

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

Lab Sample ID: MB 880-11158/1-A
Matrix: Solid
Analysis Batch: 11193

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11158

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/01/21 14:48	11/02/21 20:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/01/21 14:48	11/02/21 20:41	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/01/21 14:48	11/02/21 20:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*11/01/21 14:48*	*11/02/21 20:41*	*1*
o-Terphenyl	*114*		*70 - 130*	*11/01/21 14:48*	*11/02/21 20:41*	*1*

Lab Sample ID: LCS 880-11158/2-A
Matrix: Solid
Analysis Batch: 11193

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11158

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	999.0		mg/Kg		100	70 - 130
Diesel Range Organics (Over C10-C28)	1000	991.9		mg/Kg		99	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

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

Lab Sample ID: LCS 880-11158/2-A
Matrix: Solid
Analysis Batch: 11193

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11158

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	104		70 - 130

Lab Sample ID: LCSD 880-11158/3-A
Matrix: Solid
Analysis Batch: 11193

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11158

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	897.3		mg/Kg		90	70 - 130	11	20
Diesel Range Organics (Over C10-C28)			1000	1021		mg/Kg		102	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: 890-1495-A-1-H MS
Matrix: Solid
Analysis Batch: 11193

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 11158

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	1026		mg/Kg		103	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	964.5		mg/Kg		95	70 - 130

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

Lab Sample ID: 890-1495-A-1-I MSD
Matrix: Solid
Analysis Batch: 11193

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 11158

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	1156		mg/Kg		116	70 - 130	12	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	975.7		mg/Kg		95	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	115		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-11226/1-A
Matrix: Solid
Analysis Batch: 11254

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/02/21 21:05	1

Lab Sample ID: LCS 880-11226/2-A
Matrix: Solid
Analysis Batch: 11254

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	252.5		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-11226/3-A
Matrix: Solid
Analysis Batch: 11254

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	254.4		mg/Kg		102	90 - 110	1	20

Lab Sample ID: 880-7902-A-3-B MS
Matrix: Solid
Analysis Batch: 11254

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	122		250	389.7		mg/Kg		107	90 - 110

Lab Sample ID: 880-7902-A-3-C MSD
Matrix: Solid
Analysis Batch: 11254

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	122		250	393.4		mg/Kg		109	90 - 110	1	20

Lab Sample ID: MB 880-11234/1-A
Matrix: Solid
Analysis Batch: 11450

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/08/21 22:12	1

Lab Sample ID: LCS 880-11234/2-A
Matrix: Solid
Analysis Batch: 11450

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	274.0		mg/Kg		110	90 - 110

Lab Sample ID: LCSD 880-11234/3-A
Matrix: Solid
Analysis Batch: 11450

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	274.0		mg/Kg		110	90 - 110	0	20

QC Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-7809-A-6-E MS
Matrix: Solid
Analysis Batch: 11450

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	36.9		250	308.7		mg/Kg		109	90 - 110		

Lab Sample ID: 880-7809-A-6-F MSD
Matrix: Solid
Analysis Batch: 11450

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	36.9		250	306.1		mg/Kg		108	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

GC VOA

Analysis Batch: 11149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1503-1	BH01B	Total/NA	Solid	Total BTEX	
890-1503-2	BH02B	Total/NA	Solid	Total BTEX	
890-1503-3	BH03B	Total/NA	Solid	Total BTEX	
890-1503-4	BH04B	Total/NA	Solid	Total BTEX	
890-1503-5	BH05B	Total/NA	Solid	Total BTEX	
890-1503-6	BH06B	Total/NA	Solid	Total BTEX	
890-1503-7	BH07B	Total/NA	Solid	Total BTEX	

Analysis Batch: 11347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1503-1	BH01B	Total/NA	Solid	8021B	11348
890-1503-2	BH02B	Total/NA	Solid	8021B	11348
890-1503-3	BH03B	Total/NA	Solid	8021B	11348
890-1503-4	BH04B	Total/NA	Solid	8021B	11348
890-1503-5	BH05B	Total/NA	Solid	8021B	11348
890-1503-6	BH06B	Total/NA	Solid	8021B	11348
890-1503-7	BH07B	Total/NA	Solid	8021B	11348
MB 880-11348/5-A	Method Blank	Total/NA	Solid	8021B	11348
LCS 880-11348/1-A	Lab Control Sample	Total/NA	Solid	8021B	11348
LCSD 880-11348/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11348
890-1503-1 MS	BH01B	Total/NA	Solid	8021B	11348
890-1503-1 MSD	BH01B	Total/NA	Solid	8021B	11348

Prep Batch: 11348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1503-1	BH01B	Total/NA	Solid	5035	
890-1503-2	BH02B	Total/NA	Solid	5035	
890-1503-3	BH03B	Total/NA	Solid	5035	
890-1503-4	BH04B	Total/NA	Solid	5035	
890-1503-5	BH05B	Total/NA	Solid	5035	
890-1503-6	BH06B	Total/NA	Solid	5035	
890-1503-7	BH07B	Total/NA	Solid	5035	
MB 880-11348/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11348/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11348/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1503-1 MS	BH01B	Total/NA	Solid	5035	
890-1503-1 MSD	BH01B	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 11158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1503-1	BH01B	Total/NA	Solid	8015NM Prep	
890-1503-2	BH02B	Total/NA	Solid	8015NM Prep	
890-1503-3	BH03B	Total/NA	Solid	8015NM Prep	
890-1503-4	BH04B	Total/NA	Solid	8015NM Prep	
890-1503-5	BH05B	Total/NA	Solid	8015NM Prep	
890-1503-6	BH06B	Total/NA	Solid	8015NM Prep	
890-1503-7	BH07B	Total/NA	Solid	8015NM Prep	
MB 880-11158/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-11158/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

GC Semi VOA (Continued)

Prep Batch: 11158 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-11158/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1495-A-1-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1495-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 11193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1503-1	BH01B	Total/NA	Solid	8015B NM	11158
890-1503-2	BH02B	Total/NA	Solid	8015B NM	11158
890-1503-3	BH03B	Total/NA	Solid	8015B NM	11158
890-1503-4	BH04B	Total/NA	Solid	8015B NM	11158
890-1503-5	BH05B	Total/NA	Solid	8015B NM	11158
890-1503-6	BH06B	Total/NA	Solid	8015B NM	11158
890-1503-7	BH07B	Total/NA	Solid	8015B NM	11158
MB 880-11158/1-A	Method Blank	Total/NA	Solid	8015B NM	11158
LCS 880-11158/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	11158
LCSD 880-11158/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	11158
890-1495-A-1-H MS	Matrix Spike	Total/NA	Solid	8015B NM	11158
890-1495-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	11158

Analysis Batch: 11344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1503-1	BH01B	Total/NA	Solid	8015 NM	
890-1503-2	BH02B	Total/NA	Solid	8015 NM	
890-1503-3	BH03B	Total/NA	Solid	8015 NM	
890-1503-4	BH04B	Total/NA	Solid	8015 NM	
890-1503-5	BH05B	Total/NA	Solid	8015 NM	
890-1503-6	BH06B	Total/NA	Solid	8015 NM	
890-1503-7	BH07B	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 11226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1503-1	BH01B	Soluble	Solid	DI Leach	
MB 880-11226/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11226/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11226/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-7902-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-7902-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 11234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1503-2	BH02B	Soluble	Solid	DI Leach	
890-1503-3	BH03B	Soluble	Solid	DI Leach	
890-1503-4	BH04B	Soluble	Solid	DI Leach	
890-1503-5	BH05B	Soluble	Solid	DI Leach	
890-1503-6	BH06B	Soluble	Solid	DI Leach	
890-1503-7	BH07B	Soluble	Solid	DI Leach	
MB 880-11234/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11234/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11234/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

HPLC/IC (Continued)

Leach Batch: 11234 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7809-A-6-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-7809-A-6-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 11254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1503-1	BH01B	Soluble	Solid	300.0	11226
MB 880-11226/1-A	Method Blank	Soluble	Solid	300.0	11226
LCS 880-11226/2-A	Lab Control Sample	Soluble	Solid	300.0	11226
LCSD 880-11226/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11226
880-7902-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	11226
880-7902-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	11226

Analysis Batch: 11450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1503-2	BH02B	Soluble	Solid	300.0	11234
890-1503-3	BH03B	Soluble	Solid	300.0	11234
890-1503-4	BH04B	Soluble	Solid	300.0	11234
890-1503-5	BH05B	Soluble	Solid	300.0	11234
890-1503-6	BH06B	Soluble	Solid	300.0	11234
890-1503-7	BH07B	Soluble	Solid	300.0	11234
MB 880-11234/1-A	Method Blank	Soluble	Solid	300.0	11234
LCS 880-11234/2-A	Lab Control Sample	Soluble	Solid	300.0	11234
LCSD 880-11234/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11234
880-7809-A-6-E MS	Matrix Spike	Soluble	Solid	300.0	11234
880-7809-A-6-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	11234

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

Client Sample ID: BH01B
Date Collected: 10/28/21 10:45
Date Received: 10/29/21 13:00

Lab Sample ID: 890-1503-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	11348	11/03/21 09:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11347	11/03/21 12:47	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/01/21 14:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	11158	11/01/21 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11193	11/03/21 03:43	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	11226	11/03/21 10:51	CH	XEN MID
Soluble	Analysis	300.0		1			11254	11/03/21 13:54	CH	XEN MID

Client Sample ID: BH02B
Date Collected: 10/28/21 11:50
Date Received: 10/29/21 13:00

Lab Sample ID: 890-1503-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	11348	11/03/21 09:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11347	11/03/21 13:09	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	11158	11/01/21 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11193	11/03/21 04:05	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	11234	11/02/21 12:06	CH	XEN MID
Soluble	Analysis	300.0		1			11450	11/09/21 00:40	CH	XEN MID

Client Sample ID: BH03B
Date Collected: 10/28/21 12:35
Date Received: 10/29/21 13:00

Lab Sample ID: 890-1503-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	11348	11/03/21 09:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11347	11/03/21 13:29	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	11158	11/01/21 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11193	11/03/21 04:28	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	11234	11/02/21 12:06	CH	XEN MID
Soluble	Analysis	300.0		1			11450	11/09/21 00:47	CH	XEN MID

Client Sample ID: BH04B
Date Collected: 10/28/21 13:35
Date Received: 10/29/21 13:00

Lab Sample ID: 890-1503-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	11348	11/03/21 09:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11347	11/03/21 13:50	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

Client Sample ID: BH04B
Date Collected: 10/28/21 13:35
Date Received: 10/29/21 13:00

Lab Sample ID: 890-1503-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	11158	11/01/21 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11193	11/03/21 04:50	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	11234	11/02/21 12:06	CH	XEN MID
Soluble	Analysis	300.0		1			11450	11/09/21 01:09	CH	XEN MID

Client Sample ID: BH05B
Date Collected: 10/28/21 14:32
Date Received: 10/29/21 13:00

Lab Sample ID: 890-1503-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	11348	11/03/21 09:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11347	11/03/21 14:10	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	11158	11/01/21 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11193	11/03/21 05:12	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	11234	11/02/21 12:06	CH	XEN MID
Soluble	Analysis	300.0		1			11450	11/09/21 01:16	CH	XEN MID

Client Sample ID: BH06B
Date Collected: 10/28/21 15:25
Date Received: 10/29/21 13:00

Lab Sample ID: 890-1503-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	11348	11/03/21 09:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11347	11/03/21 14:30	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	11158	11/01/21 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11193	11/03/21 05:35	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	11234	11/02/21 12:06	CH	XEN MID
Soluble	Analysis	300.0		1			11450	11/09/21 01:24	CH	XEN MID

Client Sample ID: BH07B
Date Collected: 10/28/21 16:10
Date Received: 10/29/21 13:00

Lab Sample ID: 890-1503-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	11348	11/03/21 09:17	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11347	11/03/21 17:34	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	11158	11/01/21 14:48	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11193	11/03/21 05:57	AJ	XEN MID

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1503-1
Project/Site: Tucker Draw SDG: 31403360.009

Client Sample ID: BH07B **Lab Sample ID: 890-1503-7**
Date Collected: 10/28/21 16:10 **Matrix: Solid**
Date Received: 10/29/21 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	11234	11/02/21 12:06	CH	XEN MID
Soluble	Analysis	300.0		1			11450	11/09/21 01:31	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-1503-1
Project/Site: Tucker Draw SDG: 31403360.009

Laboratory: Eurofins Xenco, Midland

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

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

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

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

Method Summary

Client: WSP USA Inc. Job ID: 890-1503-1
Project/Site: Tucker Draw SDG: 31403360.009

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: Tucker Draw

Job ID: 890-1503-1
SDG: 31403360.009

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1503-1	BH01B	Solid	10/28/21 10:45	10/29/21 13:00	7
890-1503-2	BH02B	Solid	10/28/21 11:50	10/29/21 13:00	7
890-1503-3	BH03B	Solid	10/28/21 12:35	10/29/21 13:00	7
890-1503-4	BH04B	Solid	10/28/21 13:35	10/29/21 13:00	7
890-1503-5	BH05B	Solid	10/28/21 14:32	10/29/21 13:00	7
890-1503-6	BH06B	Solid	10/28/21 15:25	10/29/21 13:00	7
890-1503-7	BH07B	Solid	10/28/21 16:10	10/29/21 13:00	7

Chain of Custody

Work Order No: _____

XENCO LABORATORIES

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

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Project Manager:	Joseph Hernandez	Bill to: (if different)	Jim Raley
Company Name:	WSP USA	Company Name:	WPX Energy
Address:	3300 North A Street	Address:	5315 Buena Vista Dr.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM, 88220
Phone:	281-702-2329	Email:	Elliot.Lee@wsp.com, Anna.Byers@wsp.com

Work Order Comments

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

Project Name:	Tucker Draw	Turn Around	
Project Number:	31403360.009	Routine	X
P.O. Number:		Rush:	
Sampler's Name:	Elliot Lee	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	2.4/2.2	Thermometer ID		
Received Intact:	(Yes) No		TM007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
BH01B	S	10/28/2021	10:45	7'	X	X	X	X
BH02B	S	10/28/2021	11:50	7'	X	X	X	X
BH03B	S	10/28/2021	12:35	7'	X	X	X	X
BH04B	S	10/28/2021	13:35	7'	X	X	X	X
BH05B	S	10/28/2021	14:32	7'	X	X	X	X
BH06B	S	10/28/2021	15:25	7'	X	X	X	X
BH07B	S	10/28/2021	16:10	7'	X	X	X	X

890-1503 Chain of Custody

Work Order Notes

Incident # NAPP2124237477

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

Sample Comments

Discrete
Discrete
Discrete
Discrete
Discrete
Discrete
Discrete

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

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time		Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			10.29.21 1300	2			
3				4			
5				6			

Revised Date 051418 Rev 2018.1

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-488 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica.kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 890-1503-1
Address: 1211 W Florida Ave	Due Date Requested: 11/4/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Tucker Draw	Project #: 88000203			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D/DI_LEACH Chloride	8015MOD_NM/8015NM_S_Prep Full TPH	8021B/5035FP_Calc BTEX	8015MOD_Calc	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
BH01B (890-1503-1)	10/28/21	10 45 Mountain		Solid			X	X	X	X	X	1	
BH02B (890-1503-2)	10/28/21	11 50 Mountain		Solid			X	X	X	X	X	1	
BH03B (890-1503-3)	10/28/21	12 35 Mountain		Solid			X	X	X	X	X	1	
BH04B (890-1503-4)	10/28/21	13 35 Mountain		Solid			X	X	X	X	X	1	
BH05B (890-1503-5)	10/28/21	14 32 Mountain		Solid			X	X	X	X	X	1	
BH06B (890-1503-6)	10/28/21	15 25 Mountain		Solid			X	X	X	X	X	1	
BH07B (890-1503-7)	10/28/21	16 10 Mountain		Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

Possible Hazard Identification

Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	Relinquished by: Dec 10:29			Received by: Kramer	11.1.21	
	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks: 2.6/2.7

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1503-1
SDG Number: 31403360.009

Login Number: 1503
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: 890-1503-1
SDG Number: 31403360.009

Login Number: 1503
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland
List Creation: 11/01/21 08:46 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6/2.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-1504-1
Laboratory Sample Delivery Group: 31403360.009
Client Project/Site: Tucker Draw

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

Attn: Joseph Hernandez

Authorized for release by:
11/9/2021 7:56:59 PM

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

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

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

Client: WSP USA Inc.
Project/Site: Tucker Draw

Laboratory Job ID: 890-1504-1
SDG: 31403360.009

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-1504-1
Project/Site: Tucker Draw SDG: 31403360.009

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: WSP USA Inc. Job ID: 890-1504-1
Project/Site: Tucker Draw SDG: 31403360.009

Job ID: 890-1504-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1504-1

Receipt
The samples were received on 10/29/2021 1:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.2°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-11122 and analytical batch 880-10983 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: BH05A (890-1504-10). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-11249 and analytical batch 880-11321 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10

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 laboratory control sample (LCS) associated with preparation batch 880-11235 and analytical batch 880-11380 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Client Sample ID: BH01

Lab Sample ID: 890-1504-1
Matrix: Solid
Date Collected: 10/28/21 09:55
Date Received: 10/29/21 13:00
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U F2 F1	0.00199		mg/Kg		11/01/21 12:44	11/02/21 01:51	1
Toluene	<0.00199	U F2 F1	0.00199		mg/Kg		11/01/21 12:44	11/02/21 01:51	1
Ethylbenzene	<0.00199	U F1	0.00199		mg/Kg		11/01/21 12:44	11/02/21 01:51	1
m-Xylene & p-Xylene	<0.00398	U F1	0.00398		mg/Kg		11/01/21 12:44	11/02/21 01:51	1
o-Xylene	<0.00199	U F2 F1	0.00199		mg/Kg		11/01/21 12:44	11/02/21 01:51	1
Xylenes, Total	<0.00398	U F1	0.00398		mg/Kg		11/01/21 12:44	11/02/21 01:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*11/01/21 12:44*	*11/02/21 01:51*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*11/01/21 12:44*	*11/02/21 01:51*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**298**		49.9		mg/Kg			11/03/21 08:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/02/21 15:51	11/03/21 12:43	1
Diesel Range Organics (Over C10-C28)	**298**		49.9		mg/Kg		11/02/21 15:51	11/03/21 12:43	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/02/21 15:51	11/03/21 12:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*11/02/21 15:51*	*11/03/21 12:43*	*1*
o-Terphenyl	*103*		*70 - 130*	*11/02/21 15:51*	*11/03/21 12:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3860**		24.8		mg/Kg			11/06/21 06:24	5

Client Sample ID: BH01A

Lab Sample ID: 890-1504-2
Matrix: Solid
Date Collected: 10/28/21 10:30
Date Received: 10/29/21 13:00
Sample Depth: 5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/01/21 12:44	11/02/21 02:12	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/01/21 12:44	11/02/21 02:12	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/01/21 12:44	11/02/21 02:12	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/01/21 12:44	11/02/21 02:12	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/01/21 12:44	11/02/21 02:12	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/01/21 12:44	11/02/21 02:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*	*11/01/21 12:44*	*11/02/21 02:12*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Client Sample ID: BH01A

Lab Sample ID: 890-1504-2
Matrix: Solid

Date Collected: 10/28/21 10:30
Date Received: 10/29/21 13:00
Sample Depth: 5

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*11/01/21 12:44*	*11/02/21 02:12*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/03/21 08:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/02/21 15:51	11/03/21 13:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/02/21 15:51	11/03/21 13:03	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/02/21 15:51	11/03/21 13:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*11/02/21 15:51*	*11/03/21 13:03*	*1*
o-Terphenyl	*101*		*70 - 130*	*11/02/21 15:51*	*11/03/21 13:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**369**		25.0		mg/Kg			11/06/21 06:47	5

Client Sample ID: BH02

Lab Sample ID: 890-1504-3
Matrix: Solid

Date Collected: 10/28/21 11:10
Date Received: 10/29/21 13:00
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 02:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 02:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 02:32	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/01/21 12:44	11/02/21 02:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 02:32	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/01/21 12:44	11/02/21 02:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*11/01/21 12:44*	*11/02/21 02:32*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*11/01/21 12:44*	*11/02/21 02:32*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/03/21 08:46	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Client Sample ID: BH02

Lab Sample ID: 890-1504-3
Matrix: Solid
Date Collected: 10/28/21 11:10
Date Received: 10/29/21 13:00
Sample Depth: 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/02/21 15:51	11/03/21 13:23	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/02/21 15:51	11/03/21 13:23	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/02/21 15:51	11/03/21 13:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*11/02/21 15:51*	*11/03/21 13:23*	*1*
o-Terphenyl	*103*		*70 - 130*	*11/02/21 15:51*	*11/03/21 13:23*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**351**		5.00		mg/Kg			11/06/21 06:55	1

Client Sample ID: BH02A

Lab Sample ID: 890-1504-4
Matrix: Solid
Date Collected: 10/28/21 11:40
Date Received: 10/29/21 13:00
Sample Depth: 5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/01/21 12:44	11/02/21 02:53	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/01/21 12:44	11/02/21 02:53	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/01/21 12:44	11/02/21 02:53	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/01/21 12:44	11/02/21 02:53	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/01/21 12:44	11/02/21 02:53	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/01/21 12:44	11/02/21 02:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*11/01/21 12:44*	*11/02/21 02:53*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*11/01/21 12:44*	*11/02/21 02:53*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			11/03/21 08:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		11/02/21 15:51	11/03/21 13:43	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		11/02/21 15:51	11/03/21 13:43	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		11/02/21 15:51	11/03/21 13:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*11/02/21 15:51*	*11/03/21 13:43*	*1*
o-Terphenyl	*109*		*70 - 130*	*11/02/21 15:51*	*11/03/21 13:43*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Client Sample ID: BH02A

Lab Sample ID: 890-1504-4
Matrix: Solid
Date Collected: 10/28/21 11:40
Date Received: 10/29/21 13:00
Sample Depth: 5

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	43.3		5.00		mg/Kg			11/06/21 07:03	1

Client Sample ID: BH03

Lab Sample ID: 890-1504-5
Matrix: Solid
Date Collected: 10/28/21 11:59
Date Received: 10/29/21 13:00
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/01/21 12:44	11/02/21 03:13	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/01/21 12:44	11/02/21 03:13	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/01/21 12:44	11/02/21 03:13	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/01/21 12:44	11/02/21 03:13	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/01/21 12:44	11/02/21 03:13	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/01/21 12:44	11/02/21 03:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*11/01/21 12:44*	*11/02/21 03:13*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*11/01/21 12:44*	*11/02/21 03:13*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/03/21 08:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/02/21 15:51	11/03/21 14:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/02/21 15:51	11/03/21 14:03	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/02/21 15:51	11/03/21 14:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*11/02/21 15:51*	*11/03/21 14:03*	*1*
o-Terphenyl	*104*		*70 - 130*	*11/02/21 15:51*	*11/03/21 14:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	299		4.96		mg/Kg			11/06/21 07:10	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Client Sample ID: BH03A

Lab Sample ID: 890-1504-6
Matrix: Solid
Date Collected: 10/28/21 12:27
Date Received: 10/29/21 13:00
Sample Depth: 5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 03:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 03:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 03:34	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/01/21 12:44	11/02/21 03:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 03:34	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/01/21 12:44	11/02/21 03:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*11/01/21 12:44*	*11/02/21 03:34*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*11/01/21 12:44*	*11/02/21 03:34*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			11/03/21 08:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		11/02/21 15:51	11/03/21 14:23	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		11/02/21 15:51	11/03/21 14:23	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		11/02/21 15:51	11/03/21 14:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*11/02/21 15:51*	*11/03/21 14:23*	*1*
o-Terphenyl	*102*		*70 - 130*	*11/02/21 15:51*	*11/03/21 14:23*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**88.3**		5.00		mg/Kg			11/06/21 07:18	1

Client Sample ID: BH04

Lab Sample ID: 890-1504-7
Matrix: Solid
Date Collected: 10/28/21 13:10
Date Received: 10/29/21 13:00
Sample Depth: 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/01/21 12:44	11/02/21 03:54	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/01/21 12:44	11/02/21 03:54	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/01/21 12:44	11/02/21 03:54	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/01/21 12:44	11/02/21 03:54	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/01/21 12:44	11/02/21 03:54	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/01/21 12:44	11/02/21 03:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*11/01/21 12:44*	*11/02/21 03:54*	*1*

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Client Sample ID: BH04

Date Collected: 10/28/21 13:10
Date Received: 10/29/21 13:00
Sample Depth: 2

Lab Sample ID: 890-1504-7

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*11/01/21 12:44*	*11/02/21 03:54*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/03/21 08:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/02/21 15:51	11/03/21 14:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/02/21 15:51	11/03/21 14:43	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/02/21 15:51	11/03/21 14:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*11/02/21 15:51*	*11/03/21 14:43*	*1*
o-Terphenyl	*99*		*70 - 130*	*11/02/21 15:51*	*11/03/21 14:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**186**		4.95		mg/Kg			11/06/21 07:26	1

Client Sample ID: BH04A

Date Collected: 10/28/21 13:30
Date Received: 10/29/21 13:00
Sample Depth: 5

Lab Sample ID: 890-1504-8

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 04:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 04:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 04:14	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		11/01/21 12:44	11/02/21 04:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 04:14	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		11/01/21 12:44	11/02/21 04:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*11/01/21 12:44*	*11/02/21 04:14*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*11/01/21 12:44*	*11/02/21 04:14*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/03/21 08:46	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Client Sample ID: BH04A

Lab Sample ID: 890-1504-8
Matrix: Solid
Date Collected: 10/28/21 13:30
Date Received: 10/29/21 13:00
Sample Depth: 5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/02/21 15:51	11/03/21 15:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/02/21 15:51	11/03/21 15:03	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/02/21 15:51	11/03/21 15:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*11/02/21 15:51*	*11/03/21 15:03*	*1*
o-Terphenyl	*99*		*70 - 130*	*11/02/21 15:51*	*11/03/21 15:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**46.9**		4.98		mg/Kg			11/09/21 01:38	1

Client Sample ID: BH05

Lab Sample ID: 890-1504-9
Matrix: Solid
Date Collected: 10/28/21 14:10
Date Received: 10/29/21 13:00
Sample Depth: 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 04:35	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 04:35	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 04:35	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		11/01/21 12:44	11/02/21 04:35	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 04:35	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		11/01/21 12:44	11/02/21 04:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*70 - 130*	*11/01/21 12:44*	*11/02/21 04:35*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*11/01/21 12:44*	*11/02/21 04:35*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/03/21 08:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/02/21 15:51	11/03/21 15:23	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/02/21 15:51	11/03/21 15:23	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/02/21 15:51	11/03/21 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*11/02/21 15:51*	*11/03/21 15:23*	*1*
o-Terphenyl	*97*		*70 - 130*	*11/02/21 15:51*	*11/03/21 15:23*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Client Sample ID: BH05

Lab Sample ID: 890-1504-9
Matrix: Solid
Date Collected: 10/28/21 14:10
Date Received: 10/29/21 13:00
Sample Depth: 3

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	40.2		4.96		mg/Kg			11/09/21 01:46	1

Client Sample ID: BH05A

Lab Sample ID: 890-1504-10
Matrix: Solid
Date Collected: 10/28/21 14:25
Date Received: 10/29/21 13:00
Sample Depth: 5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/01/21 12:44	11/02/21 04:55	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/01/21 12:44	11/02/21 04:55	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/01/21 12:44	11/02/21 04:55	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		11/01/21 12:44	11/02/21 04:55	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/01/21 12:44	11/02/21 04:55	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/01/21 12:44	11/02/21 04:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*134*	*S1+*	*70 - 130*	*11/01/21 12:44*	*11/02/21 04:55*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*11/01/21 12:44*	*11/02/21 04:55*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/03/21 08:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		11/02/21 15:51	11/03/21 16:02	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/02/21 15:51	11/03/21 16:02	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/02/21 15:51	11/03/21 16:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*11/02/21 15:51*	*11/03/21 16:02*	*1*
o-Terphenyl	*97*		*70 - 130*	*11/02/21 15:51*	*11/03/21 16:02*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	88.0	*-	5.00		mg/Kg			11/06/21 22:51	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Client Sample ID: BH06

Lab Sample ID: 890-1504-11

Date Collected: 10/28/21 14:50
Matrix: Solid
Date Received: 10/29/21 13:00
Sample Depth: 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 06:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 06:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 06:43	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		11/01/21 12:44	11/02/21 06:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 06:43	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		11/01/21 12:44	11/02/21 06:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*11/01/21 12:44*	*11/02/21 06:43*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*11/01/21 12:44*	*11/02/21 06:43*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/03/21 08:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		11/02/21 14:31	11/04/21 03:57	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/02/21 14:31	11/04/21 03:57	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/02/21 14:31	11/04/21 03:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*11/02/21 14:31*	*11/04/21 03:57*	*1*
o-Terphenyl	*117*		*70 - 130*	*11/02/21 14:31*	*11/04/21 03:57*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**65.1**	*-	4.99		mg/Kg			11/06/21 23:13	1

Client Sample ID: BH06A

Lab Sample ID: 890-1504-12

Date Collected: 10/28/21 15:20
Matrix: Solid
Date Received: 10/29/21 13:00
Sample Depth: 5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 07:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 07:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 07:04	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		11/01/21 12:44	11/02/21 07:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 07:04	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		11/01/21 12:44	11/02/21 07:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*11/01/21 12:44*	*11/02/21 07:04*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Client Sample ID: BH06A

Lab Sample ID: 890-1504-12
Matrix: Solid
Date Collected: 10/28/21 15:20
Date Received: 10/29/21 13:00
Sample Depth: 5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*11/01/21 12:44*	*11/02/21 07:04*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/03/21 08:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		11/02/21 14:31	11/04/21 04:18	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/02/21 14:31	11/04/21 04:18	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/02/21 14:31	11/04/21 04:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*100*		*70 - 130*	*11/02/21 14:31*	*11/04/21 04:18*	*1*
o-Terphenyl	*115*		*70 - 130*	*11/02/21 14:31*	*11/04/21 04:18*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14.0**	*-	4.98		mg/Kg			11/06/21 23:21	1

Client Sample ID: BH07

Lab Sample ID: 890-1504-13
Matrix: Solid
Date Collected: 10/28/21 15:45
Date Received: 10/29/21 13:00
Sample Depth: 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 07:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 07:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 07:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/01/21 12:44	11/02/21 07:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 07:24	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/01/21 12:44	11/02/21 07:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*11/01/21 12:44*	*11/02/21 07:24*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*11/01/21 12:44*	*11/02/21 07:24*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			11/03/21 08:46	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Client Sample ID: BH07

Lab Sample ID: 890-1504-13
Matrix: Solid
Date Collected: 10/28/21 15:45
Date Received: 10/29/21 13:00
Sample Depth: 3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		11/02/21 14:31	11/04/21 04:40	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		11/02/21 14:31	11/04/21 04:40	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		11/02/21 14:31	11/04/21 04:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*11/02/21 14:31*	*11/04/21 04:40*	*1*
o-Terphenyl	*114*		*70 - 130*	*11/02/21 14:31*	*11/04/21 04:40*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**28.4**	*-	4.97		mg/Kg			11/06/21 23:28	1

Client Sample ID: BH07A

Lab Sample ID: 890-1504-14
Matrix: Solid
Date Collected: 10/28/21 15:57
Date Received: 10/29/21 13:00
Sample Depth: 5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		11/01/21 12:44	11/02/21 07:45	1
Toluene	<0.00198	U	0.00198		mg/Kg		11/01/21 12:44	11/02/21 07:45	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		11/01/21 12:44	11/02/21 07:45	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		11/01/21 12:44	11/02/21 07:45	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		11/01/21 12:44	11/02/21 07:45	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		11/01/21 12:44	11/02/21 07:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*11/01/21 12:44*	*11/02/21 07:45*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*11/01/21 12:44*	*11/02/21 07:45*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			11/03/21 12:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			11/03/21 08:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *1	49.8		mg/Kg		11/02/21 14:31	11/04/21 05:01	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		11/02/21 14:31	11/04/21 05:01	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		11/02/21 14:31	11/04/21 05:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*11/02/21 14:31*	*11/04/21 05:01*	*1*
o-Terphenyl	*114*		*70 - 130*	*11/02/21 14:31*	*11/04/21 05:01*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Client Sample ID: BH07A
Date Collected: 10/28/21 15:57
Date Received: 10/29/21 13:00
Sample Depth: 5

Lab Sample ID: 890-1504-14
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14.8	*-	4.95		mg/Kg			11/06/21 23:35	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-1504-1	BH01	116	104
890-1504-1 MS	BH01	109	93
890-1504-1 MSD	BH01	71	92
890-1504-2	BH01A	132 S1+	104
890-1504-3	BH02	125	102
890-1504-4	BH02A	125	100
890-1504-5	BH03	122	103
890-1504-6	BH03A	120	98
890-1504-7	BH04	117	94
890-1504-8	BH04A	117	96
890-1504-9	BH05	75	84
890-1504-10	BH05A	134 S1+	108
890-1504-11	BH06	118	101
890-1504-12	BH06A	127	108
890-1504-13	BH07	114	99
890-1504-14	BH07A	121	100
LCS 880-11122/1-A	Lab Control Sample	117	98
LCSD 880-11122/2-A	Lab Control Sample Dup	112	99
MB 880-10922/5-A	Method Blank	118	105
MB 880-11122/5-A	Method Blank	120	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)
880-7765-A-21-G MS	Matrix Spike	97	98
880-7765-A-21-H MSD	Matrix Spike Duplicate	99	99
890-1504-1	BH01	94	103
890-1504-2	BH01A	93	101
890-1504-3	BH02	96	103
890-1504-4	BH02A	98	109
890-1504-5	BH03	98	104
890-1504-6	BH03A	95	102
890-1504-7	BH04	93	99
890-1504-8	BH04A	93	99
890-1504-9	BH05	88	97
890-1504-10	BH05A	88	97
890-1504-11	BH06	101	117
890-1504-12	BH06A	100	115
890-1504-13	BH07	101	114
890-1504-14	BH07A	98	114
890-1514-A-1-D MS	Matrix Spike	97	81
890-1514-A-1-E MSD	Matrix Spike Duplicate	111	84
LCS 880-11249/2-A	Lab Control Sample	107	119

Surrogate Summary

Client: WSP USA Inc. Job ID: 890-1504-1
Project/Site: Tucker Draw SDG: 31403360.009

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
LCS 880-11260/2-A	Lab Control Sample	105	90										
LCSD 880-11249/3-A	Lab Control Sample Dup	105	115										
LCSD 880-11260/3-A	Lab Control Sample Dup	94	86										
MB 880-11249/1-A	Method Blank	117	139 S1+										
MB 880-11260/1-A	Method Blank	97	109										

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-10922/5-A
Matrix: Solid
Analysis Batch: 10983

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10922

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/29/21 11:05	11/01/21 13:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/29/21 11:05	11/01/21 13:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/29/21 11:05	11/01/21 13:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/29/21 11:05	11/01/21 13:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/29/21 11:05	11/01/21 13:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/29/21 11:05	11/01/21 13:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*10/29/21 11:05*	*11/01/21 13:51*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*10/29/21 11:05*	*11/01/21 13:51*	*1*

Lab Sample ID: MB 880-11122/5-A
Matrix: Solid
Analysis Batch: 10983

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11122

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 01:23	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 01:23	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 01:23	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/01/21 12:44	11/02/21 01:23	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/21 12:44	11/02/21 01:23	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/01/21 12:44	11/02/21 01:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*11/01/21 12:44*	*11/02/21 01:23*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*11/01/21 12:44*	*11/02/21 01:23*	*1*

Lab Sample ID: LCS 880-11122/1-A
Matrix: Solid
Analysis Batch: 10983

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11122

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.08859		mg/Kg		89	70 - 130
Toluene	0.100	0.09434		mg/Kg		94	70 - 130
Ethylbenzene	0.100	0.1007		mg/Kg		101	70 - 130
m-Xylene & p-Xylene	0.200	0.1972		mg/Kg		99	70 - 130
o-Xylene	0.100	0.09685		mg/Kg		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-11122/2-A
Matrix: Solid
Analysis Batch: 10983

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11122

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.09193		mg/Kg		92	70 - 130	4	35

QC Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

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

Lab Sample ID: LCSD 880-11122/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 10983 — **Prep Batch: 11122**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.09574		mg/Kg		96	70 - 130	1	35
Ethylbenzene			0.100	0.1005		mg/Kg		101	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.1974		mg/Kg		99	70 - 130	0	35
o-Xylene			0.100	0.09567		mg/Kg		96	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-1504-1 MS — **Client Sample ID: BH01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 10983 — **Prep Batch: 11122**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00199	U F2 F1	0.100	<0.00200	U F1	mg/Kg		0.4	70 - 130
Toluene	<0.00199	U F2 F1	0.100	<0.00200	U F1	mg/Kg		-0.03	70 - 130
Ethylbenzene	<0.00199	U F1	0.100	<0.00200	U F1	mg/Kg		0	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.200	<0.00400	U F1	mg/Kg		0	70 - 130
o-Xylene	<0.00199	U F2 F1	0.100	<0.00200	U F1	mg/Kg		2	70 - 130

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

Lab Sample ID: 890-1504-1 MSD — **Client Sample ID: BH01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 10983 — **Prep Batch: 11122**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U F2 F1	0.0996	0.03503	F2 F1	mg/Kg		35	70 - 130	195	35
Toluene	<0.00199	U F2 F1	0.0996	0.03754	F2 F1	mg/Kg		37	70 - 130	192	35
Ethylbenzene	<0.00199	U F1	0.0996	0.03254	F1	mg/Kg		33	70 - 130	NC	35
m-Xylene & p-Xylene	<0.00398	U F1	0.199	0.07059	F1	mg/Kg		35	70 - 130	NC	35
o-Xylene	<0.00199	U F2 F1	0.0996	0.04083	F2 F1	mg/Kg		41	70 - 130	184	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*71*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

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

Lab Sample ID: MB 880-11249/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 11321 — **Prep Batch: 11249**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/02/21 14:31	11/03/21 19:59	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

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

Lab Sample ID: MB 880-11249/1-A
Matrix: Solid
Analysis Batch: 11321

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11249

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/02/21 14:31	11/03/21 19:59	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/02/21 14:31	11/03/21 19:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*11/02/21 14:31*	*11/03/21 19:59*	*1*
o-Terphenyl	*139*	*S1+*	*70 - 130*	*11/02/21 14:31*	*11/03/21 19:59*	*1*

Lab Sample ID: LCS 880-11249/2-A
Matrix: Solid
Analysis Batch: 11321

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11249

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	866.1		mg/Kg		87	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1156		mg/Kg		116	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*107*		*70 - 130*
o-Terphenyl	*119*		*70 - 130*

Lab Sample ID: LCSD 880-11249/3-A
Matrix: Solid
Analysis Batch: 11321

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11249

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1127	*1	mg/Kg		113	70 - 130	26	20
Diesel Range Organics (Over C10-C28)	1000	1158		mg/Kg		116	70 - 130	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*115*		*70 - 130*

Lab Sample ID: 880-7765-A-21-G MS
Matrix: Solid
Analysis Batch: 11321

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 11249

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 *1	997	1180		mg/Kg		118	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1059		mg/Kg		106	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*97*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

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

Lab Sample ID: 880-7765-A-21-H MSD
Matrix: Solid
Analysis Batch: 11321

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 11249

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 *1	1000	1192		mg/Kg		119	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	1081		mg/Kg		108	70 - 130	2	20

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

Lab Sample ID: MB 880-11260/1-A
Matrix: Solid
Analysis Batch: 11319

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11260

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/02/21 15:51	11/03/21 10:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/02/21 15:51	11/03/21 10:40	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/02/21 15:51	11/03/21 10:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*11/02/21 15:51*	*11/03/21 10:40*	*1*
o-Terphenyl	*109*		*70 - 130*	*11/02/21 15:51*	*11/03/21 10:40*	*1*

Lab Sample ID: LCS 880-11260/2-A
Matrix: Solid
Analysis Batch: 11319

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11260

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	838.4		mg/Kg		84	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	851.4		mg/Kg		85	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*90*		*70 - 130*

Lab Sample ID: LCSD 880-11260/3-A
Matrix: Solid
Analysis Batch: 11319

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11260

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	953.0		mg/Kg		95	70 - 130	13	20
Diesel Range Organics (Over C10-C28)			1000	788.7		mg/Kg		79	70 - 130	8	20

QC Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

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

Lab Sample ID: LCSD 880-11260/3-A
Matrix: Solid
Analysis Batch: 11319

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11260

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	86		70 - 130

Lab Sample ID: 890-1514-A-1-D MS
Matrix: Solid
Analysis Batch: 11319

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 11260

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	931.4		mg/Kg		93	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	868.7		mg/Kg		85	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	81		70 - 130

Lab Sample ID: 890-1514-A-1-E MSD
Matrix: Solid
Analysis Batch: 11319

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 11260

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	964.0		mg/Kg		96	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	900.3		mg/Kg		88	70 - 130	4	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	84		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-11227/1-A
Matrix: Solid
Analysis Batch: 11379

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/06/21 05:15	1

Lab Sample ID: LCS 880-11227/2-A
Matrix: Solid
Analysis Batch: 11379

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	266.7		mg/Kg		107	90 - 110

QC Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-11227/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 11379

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	267.5		mg/Kg		107	90 - 110	0	20

Lab Sample ID: 890-1504-7 MS — **Client Sample ID: BH04**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 11379

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	186		248	445.9		mg/Kg		105	90 - 110

Lab Sample ID: 890-1504-7 MSD — **Client Sample ID: BH04**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 11379

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	186		248	441.5		mg/Kg		103	90 - 110	1	20

Lab Sample ID: MB 880-11235/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 11380

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/06/21 22:29	1

Lab Sample ID: LCS 880-11235/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 11380

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride			250	222.3	*-	mg/Kg		89	90 - 110

Lab Sample ID: LCSD 880-11235/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 11380

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	225.3		mg/Kg		90	90 - 110	1	20

Lab Sample ID: 890-1504-10 MS — **Client Sample ID: BH05A**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 11380

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	88.0	*-	250	328.9		mg/Kg		96	90 - 110

Lab Sample ID: 890-1504-10 MSD — **Client Sample ID: BH05A**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 11380

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	88.0	*-	250	334.5		mg/Kg		99	90 - 110	2	20

QC Sample Results

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-11234/1-A
Matrix: Solid
Analysis Batch: 11450

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/08/21 22:12	1

Lab Sample ID: LCS 880-11234/2-A
Matrix: Solid
Analysis Batch: 11450

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	274.0		mg/Kg		110	90 - 110		

Lab Sample ID: LCSD 880-11234/3-A
Matrix: Solid
Analysis Batch: 11450

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	274.0		mg/Kg		110	90 - 110	0	20

Lab Sample ID: 880-7809-A-6-E MS
Matrix: Solid
Analysis Batch: 11450

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	36.9		250	308.7		mg/Kg		109	90 - 110		

Lab Sample ID: 880-7809-A-6-F MSD
Matrix: Solid
Analysis Batch: 11450

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	36.9		250	306.1		mg/Kg		108	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

GC VOA

Prep Batch: 10922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-10922/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 10983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-1	BH01	Total/NA	Solid	8021B	11122
890-1504-2	BH01A	Total/NA	Solid	8021B	11122
890-1504-3	BH02	Total/NA	Solid	8021B	11122
890-1504-4	BH02A	Total/NA	Solid	8021B	11122
890-1504-5	BH03	Total/NA	Solid	8021B	11122
890-1504-6	BH03A	Total/NA	Solid	8021B	11122
890-1504-7	BH04	Total/NA	Solid	8021B	11122
890-1504-8	BH04A	Total/NA	Solid	8021B	11122
890-1504-9	BH05	Total/NA	Solid	8021B	11122
890-1504-10	BH05A	Total/NA	Solid	8021B	11122
890-1504-11	BH06	Total/NA	Solid	8021B	11122
890-1504-12	BH06A	Total/NA	Solid	8021B	11122
890-1504-13	BH07	Total/NA	Solid	8021B	11122
890-1504-14	BH07A	Total/NA	Solid	8021B	11122
MB 880-10922/5-A	Method Blank	Total/NA	Solid	8021B	10922
MB 880-11122/5-A	Method Blank	Total/NA	Solid	8021B	11122
LCS 880-11122/1-A	Lab Control Sample	Total/NA	Solid	8021B	11122
LCSD 880-11122/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11122
890-1504-1 MS	BH01	Total/NA	Solid	8021B	11122
890-1504-1 MSD	BH01	Total/NA	Solid	8021B	11122

Prep Batch: 11122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-1	BH01	Total/NA	Solid	5035	
890-1504-2	BH01A	Total/NA	Solid	5035	
890-1504-3	BH02	Total/NA	Solid	5035	
890-1504-4	BH02A	Total/NA	Solid	5035	
890-1504-5	BH03	Total/NA	Solid	5035	
890-1504-6	BH03A	Total/NA	Solid	5035	
890-1504-7	BH04	Total/NA	Solid	5035	
890-1504-8	BH04A	Total/NA	Solid	5035	
890-1504-9	BH05	Total/NA	Solid	5035	
890-1504-10	BH05A	Total/NA	Solid	5035	
890-1504-11	BH06	Total/NA	Solid	5035	
890-1504-12	BH06A	Total/NA	Solid	5035	
890-1504-13	BH07	Total/NA	Solid	5035	
890-1504-14	BH07A	Total/NA	Solid	5035	
MB 880-11122/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11122/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11122/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1504-1 MS	BH01	Total/NA	Solid	5035	
890-1504-1 MSD	BH01	Total/NA	Solid	5035	

Analysis Batch: 11149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-1	BH01	Total/NA	Solid	Total BTEX	
890-1504-2	BH01A	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

GC VOA (Continued)

Analysis Batch: 11149 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-3	BH02	Total/NA	Solid	Total BTEX	
890-1504-4	BH02A	Total/NA	Solid	Total BTEX	
890-1504-5	BH03	Total/NA	Solid	Total BTEX	
890-1504-6	BH03A	Total/NA	Solid	Total BTEX	
890-1504-7	BH04	Total/NA	Solid	Total BTEX	
890-1504-8	BH04A	Total/NA	Solid	Total BTEX	
890-1504-9	BH05	Total/NA	Solid	Total BTEX	
890-1504-10	BH05A	Total/NA	Solid	Total BTEX	
890-1504-11	BH06	Total/NA	Solid	Total BTEX	
890-1504-12	BH06A	Total/NA	Solid	Total BTEX	
890-1504-13	BH07	Total/NA	Solid	Total BTEX	
890-1504-14	BH07A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 11249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-11	BH06	Total/NA	Solid	8015NM Prep	
890-1504-12	BH06A	Total/NA	Solid	8015NM Prep	
890-1504-13	BH07	Total/NA	Solid	8015NM Prep	
890-1504-14	BH07A	Total/NA	Solid	8015NM Prep	
MB 880-11249/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-11249/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-11249/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-7765-A-21-G MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-7765-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 11260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-1	BH01	Total/NA	Solid	8015NM Prep	
890-1504-2	BH01A	Total/NA	Solid	8015NM Prep	
890-1504-3	BH02	Total/NA	Solid	8015NM Prep	
890-1504-4	BH02A	Total/NA	Solid	8015NM Prep	
890-1504-5	BH03	Total/NA	Solid	8015NM Prep	
890-1504-6	BH03A	Total/NA	Solid	8015NM Prep	
890-1504-7	BH04	Total/NA	Solid	8015NM Prep	
890-1504-8	BH04A	Total/NA	Solid	8015NM Prep	
890-1504-9	BH05	Total/NA	Solid	8015NM Prep	
890-1504-10	BH05A	Total/NA	Solid	8015NM Prep	
MB 880-11260/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-11260/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-11260/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1514-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1514-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 11319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-1	BH01	Total/NA	Solid	8015B NM	11260
890-1504-2	BH01A	Total/NA	Solid	8015B NM	11260
890-1504-3	BH02	Total/NA	Solid	8015B NM	11260
890-1504-4	BH02A	Total/NA	Solid	8015B NM	11260

QC Association Summary

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

GC Semi VOA (Continued)

Analysis Batch: 11319 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-5	BH03	Total/NA	Solid	8015B NM	11260
890-1504-6	BH03A	Total/NA	Solid	8015B NM	11260
890-1504-7	BH04	Total/NA	Solid	8015B NM	11260
890-1504-8	BH04A	Total/NA	Solid	8015B NM	11260
890-1504-9	BH05	Total/NA	Solid	8015B NM	11260
890-1504-10	BH05A	Total/NA	Solid	8015B NM	11260
MB 880-11260/1-A	Method Blank	Total/NA	Solid	8015B NM	11260
LCS 880-11260/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	11260
LCSD 880-11260/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	11260
890-1514-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	11260
890-1514-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	11260

Analysis Batch: 11321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-11	BH06	Total/NA	Solid	8015B NM	11249
890-1504-12	BH06A	Total/NA	Solid	8015B NM	11249
890-1504-13	BH07	Total/NA	Solid	8015B NM	11249
890-1504-14	BH07A	Total/NA	Solid	8015B NM	11249
MB 880-11249/1-A	Method Blank	Total/NA	Solid	8015B NM	11249
LCS 880-11249/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	11249
LCSD 880-11249/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	11249
880-7765-A-21-G MS	Matrix Spike	Total/NA	Solid	8015B NM	11249
880-7765-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	11249

Analysis Batch: 11344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-1	BH01	Total/NA	Solid	8015 NM	
890-1504-2	BH01A	Total/NA	Solid	8015 NM	
890-1504-3	BH02	Total/NA	Solid	8015 NM	
890-1504-4	BH02A	Total/NA	Solid	8015 NM	
890-1504-5	BH03	Total/NA	Solid	8015 NM	
890-1504-6	BH03A	Total/NA	Solid	8015 NM	
890-1504-7	BH04	Total/NA	Solid	8015 NM	
890-1504-8	BH04A	Total/NA	Solid	8015 NM	
890-1504-9	BH05	Total/NA	Solid	8015 NM	
890-1504-10	BH05A	Total/NA	Solid	8015 NM	
890-1504-11	BH06	Total/NA	Solid	8015 NM	
890-1504-12	BH06A	Total/NA	Solid	8015 NM	
890-1504-13	BH07	Total/NA	Solid	8015 NM	
890-1504-14	BH07A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 11227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-1	BH01	Soluble	Solid	DI Leach	
890-1504-2	BH01A	Soluble	Solid	DI Leach	
890-1504-3	BH02	Soluble	Solid	DI Leach	
890-1504-4	BH02A	Soluble	Solid	DI Leach	
890-1504-5	BH03	Soluble	Solid	DI Leach	
890-1504-6	BH03A	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

HPLC/IC (Continued)

Leach Batch: 11227 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-7	BH04	Soluble	Solid	DI Leach	
MB 880-11227/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11227/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11227/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1504-7 MS	BH04	Soluble	Solid	DI Leach	
890-1504-7 MSD	BH04	Soluble	Solid	DI Leach	

Leach Batch: 11234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-8	BH04A	Soluble	Solid	DI Leach	
890-1504-9	BH05	Soluble	Solid	DI Leach	
MB 880-11234/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11234/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11234/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-7809-A-6-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-7809-A-6-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 11235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-10	BH05A	Soluble	Solid	DI Leach	
890-1504-11	BH06	Soluble	Solid	DI Leach	
890-1504-12	BH06A	Soluble	Solid	DI Leach	
890-1504-13	BH07	Soluble	Solid	DI Leach	
890-1504-14	BH07A	Soluble	Solid	DI Leach	
MB 880-11235/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11235/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11235/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1504-10 MS	BH05A	Soluble	Solid	DI Leach	
890-1504-10 MSD	BH05A	Soluble	Solid	DI Leach	

Analysis Batch: 11379

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-1	BH01	Soluble	Solid	300.0	11227
890-1504-2	BH01A	Soluble	Solid	300.0	11227
890-1504-3	BH02	Soluble	Solid	300.0	11227
890-1504-4	BH02A	Soluble	Solid	300.0	11227
890-1504-5	BH03	Soluble	Solid	300.0	11227
890-1504-6	BH03A	Soluble	Solid	300.0	11227
890-1504-7	BH04	Soluble	Solid	300.0	11227
MB 880-11227/1-A	Method Blank	Soluble	Solid	300.0	11227
LCS 880-11227/2-A	Lab Control Sample	Soluble	Solid	300.0	11227
LCSD 880-11227/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11227
890-1504-7 MS	BH04	Soluble	Solid	300.0	11227
890-1504-7 MSD	BH04	Soluble	Solid	300.0	11227

Analysis Batch: 11380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-10	BH05A	Soluble	Solid	300.0	11235
890-1504-11	BH06	Soluble	Solid	300.0	11235
890-1504-12	BH06A	Soluble	Solid	300.0	11235
890-1504-13	BH07	Soluble	Solid	300.0	11235

QC Association Summary

Client: WSP USA Inc. Job ID: 890-1504-1
Project/Site: Tucker Draw SDG: 31403360.009

HPLC/IC (Continued)

Analysis Batch: 11380 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-14	BH07A	Soluble	Solid	300.0	11235
MB 880-11235/1-A	Method Blank	Soluble	Solid	300.0	11235
LCS 880-11235/2-A	Lab Control Sample	Soluble	Solid	300.0	11235
LCSD 880-11235/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11235
890-1504-10 MS	BH05A	Soluble	Solid	300.0	11235
890-1504-10 MSD	BH05A	Soluble	Solid	300.0	11235

Analysis Batch: 11450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1504-8	BH04A	Soluble	Solid	300.0	11234
890-1504-9	BH05	Soluble	Solid	300.0	11234
MB 880-11234/1-A	Method Blank	Soluble	Solid	300.0	11234
LCS 880-11234/2-A	Lab Control Sample	Soluble	Solid	300.0	11234
LCSD 880-11234/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11234
880-7809-A-6-E MS	Matrix Spike	Soluble	Solid	300.0	11234
880-7809-A-6-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	11234

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1504-1
Project/Site: Tucker Draw SDG: 31403360.009

Client Sample ID: BH01 — Lab Sample ID: 890-1504-1

Date Collected: 10/28/21 09:55 **Matrix: Solid**
Date Received: 10/29/21 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	11122	11/01/21 12:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10983	11/02/21 01:51	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	11260	11/02/21 15:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11319	11/03/21 12:43	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	11227	11/02/21 11:52	CH	XEN MID
Soluble	Analysis	300.0		5			11379	11/06/21 06:24	CH	XEN MID

Client Sample ID: BH01A — Lab Sample ID: 890-1504-2

Date Collected: 10/28/21 10:30 **Matrix: Solid**
Date Received: 10/29/21 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	11122	11/01/21 12:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10983	11/02/21 02:12	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	11260	11/02/21 15:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11319	11/03/21 13:03	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	11227	11/02/21 11:52	CH	XEN MID
Soluble	Analysis	300.0		5			11379	11/06/21 06:47	CH	XEN MID

Client Sample ID: BH02 — Lab Sample ID: 890-1504-3

Date Collected: 10/28/21 11:10 **Matrix: Solid**
Date Received: 10/29/21 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	11122	11/01/21 12:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10983	11/02/21 02:32	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	11260	11/02/21 15:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11319	11/03/21 13:23	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	11227	11/02/21 11:52	CH	XEN MID
Soluble	Analysis	300.0		1			11379	11/06/21 06:55	CH	XEN MID

Client Sample ID: BH02A — Lab Sample ID: 890-1504-4

Date Collected: 10/28/21 11:40 **Matrix: Solid**
Date Received: 10/29/21 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	11122	11/01/21 12:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10983	11/02/21 02:53	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Client Sample ID: BH02A
Date Collected: 10/28/21 11:40
Date Received: 10/29/21 13:00

Lab Sample ID: 890-1504-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	11260	11/02/21 15:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11319	11/03/21 13:43	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	11227	11/02/21 11:52	CH	XEN MID
Soluble	Analysis	300.0		1			11379	11/06/21 07:03	CH	XEN MID

Client Sample ID: BH03
Date Collected: 10/28/21 11:59
Date Received: 10/29/21 13:00

Lab Sample ID: 890-1504-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	11122	11/01/21 12:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10983	11/02/21 03:13	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	11260	11/02/21 15:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11319	11/03/21 14:03	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	11227	11/02/21 11:52	CH	XEN MID
Soluble	Analysis	300.0		1			11379	11/06/21 07:10	CH	XEN MID

Client Sample ID: BH03A
Date Collected: 10/28/21 12:27
Date Received: 10/29/21 13:00

Lab Sample ID: 890-1504-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	11122	11/01/21 12:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10983	11/02/21 03:34	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	11260	11/02/21 15:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11319	11/03/21 14:23	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	11227	11/02/21 11:52	CH	XEN MID
Soluble	Analysis	300.0		1			11379	11/06/21 07:18	CH	XEN MID

Client Sample ID: BH04
Date Collected: 10/28/21 13:10
Date Received: 10/29/21 13:00

Lab Sample ID: 890-1504-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	11122	11/01/21 12:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10983	11/02/21 03:54	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	11260	11/02/21 15:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11319	11/03/21 14:43	AJ	XEN MID

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1504-1
Project/Site: Tucker Draw SDG: 31403360.009

Client Sample ID: BH04 — Lab Sample ID: 890-1504-7

Date Collected: 10/28/21 13:10 **Matrix: Solid**
Date Received: 10/29/21 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	11227	11/02/21 11:52	CH	XEN MID
Soluble	Analysis	300.0		1			11379	11/06/21 07:26	CH	XEN MID

Client Sample ID: BH04A — Lab Sample ID: 890-1504-8

Date Collected: 10/28/21 13:30 **Matrix: Solid**
Date Received: 10/29/21 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	11122	11/01/21 12:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10983	11/02/21 04:14	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	11260	11/02/21 15:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11319	11/03/21 15:03	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	11234	11/02/21 12:06	CH	XEN MID
Soluble	Analysis	300.0		1			11450	11/09/21 01:38	CH	XEN MID

Client Sample ID: BH05 — Lab Sample ID: 890-1504-9

Date Collected: 10/28/21 14:10 **Matrix: Solid**
Date Received: 10/29/21 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	11122	11/01/21 12:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10983	11/02/21 04:35	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	11260	11/02/21 15:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11319	11/03/21 15:23	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	11234	11/02/21 12:06	CH	XEN MID
Soluble	Analysis	300.0		1			11450	11/09/21 01:46	CH	XEN MID

Client Sample ID: BH05A — Lab Sample ID: 890-1504-10

Date Collected: 10/28/21 14:25 **Matrix: Solid**
Date Received: 10/29/21 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	11122	11/01/21 12:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10983	11/02/21 04:55	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	11260	11/02/21 15:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11319	11/03/21 16:02	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	11235	11/02/21 12:18	CH	XEN MID
Soluble	Analysis	300.0		1			11380	11/06/21 22:51	CH	XEN MID

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Client Sample ID: BH06

Date Collected: 10/28/21 14:50
Date Received: 10/29/21 13:00

Lab Sample ID: 890-1504-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	11122	11/01/21 12:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10983	11/02/21 06:43	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	11249	11/02/21 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11321	11/04/21 03:57	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	11235	11/02/21 12:18	CH	XEN MID
Soluble	Analysis	300.0		1			11380	11/06/21 23:13	CH	XEN MID

Client Sample ID: BH06A

Date Collected: 10/28/21 15:20
Date Received: 10/29/21 13:00

Lab Sample ID: 890-1504-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	11122	11/01/21 12:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10983	11/02/21 07:04	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	11249	11/02/21 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11321	11/04/21 04:18	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	11235	11/02/21 12:18	CH	XEN MID
Soluble	Analysis	300.0		1			11380	11/06/21 23:21	CH	XEN MID

Client Sample ID: BH07

Date Collected: 10/28/21 15:45
Date Received: 10/29/21 13:00

Lab Sample ID: 890-1504-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	11122	11/01/21 12:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10983	11/02/21 07:24	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	11249	11/02/21 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11321	11/04/21 04:40	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	11235	11/02/21 12:18	CH	XEN MID
Soluble	Analysis	300.0		1			11380	11/06/21 23:28	CH	XEN MID

Client Sample ID: BH07A

Date Collected: 10/28/21 15:57
Date Received: 10/29/21 13:00

Lab Sample ID: 890-1504-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	11122	11/01/21 12:44	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10983	11/02/21 07:45	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11149	11/03/21 12:38	AJ	XEN MID

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1504-1
Project/Site: Tucker Draw SDG: 31403360.009

Client Sample ID: BH07A
Date Collected: 10/28/21 15:57
Date Received: 10/29/21 13:00

Lab Sample ID: 890-1504-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			11344	11/03/21 08:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	11249	11/02/21 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11321	11/04/21 05:01	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	11235	11/02/21 12:18	CH	XEN MID
Soluble	Analysis	300.0		1			11380	11/06/21 23:35	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-1504-1
Project/Site: Tucker Draw SDG: 31403360.009

Laboratory: Eurofins Xenco, Midland

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

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

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

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

Method Summary

Client: WSP USA Inc. Job ID: 890-1504-1
Project/Site: Tucker Draw SDG: 31403360.009

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: Tucker Draw

Job ID: 890-1504-1
SDG: 31403360.009

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1504-1	BH01	Solid	10/28/21 09:55	10/29/21 13:00	1
890-1504-2	BH01A	Solid	10/28/21 10:30	10/29/21 13:00	5
890-1504-3	BH02	Solid	10/28/21 11:10	10/29/21 13:00	1
890-1504-4	BH02A	Solid	10/28/21 11:40	10/29/21 13:00	5
890-1504-5	BH03	Solid	10/28/21 11:59	10/29/21 13:00	1
890-1504-6	BH03A	Solid	10/28/21 12:27	10/29/21 13:00	5
890-1504-7	BH04	Solid	10/28/21 13:10	10/29/21 13:00	2
890-1504-8	BH04A	Solid	10/28/21 13:30	10/29/21 13:00	5
890-1504-9	BH05	Solid	10/28/21 14:10	10/29/21 13:00	3
890-1504-10	BH05A	Solid	10/28/21 14:25	10/29/21 13:00	5
890-1504-11	BH06	Solid	10/28/21 14:50	10/29/21 13:00	1
890-1504-12	BH06A	Solid	10/28/21 15:20	10/29/21 13:00	5
890-1504-13	BH07	Solid	10/28/21 15:45	10/29/21 13:00	3
890-1504-14	BH07A	Solid	10/28/21 15:57	10/29/21 13:00	5

Chain of Custody

XENCO LABORATORIES

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

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Work Order No: _____

Project Manager:	Joseph Hernandez	Bill to: (if different)	Jim Raley
Company Name:	WSP USA	Company Name:	WPX Energy
Address:	3300 North A Street	Address:	5315 Buena Vista Dr.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM, 88220
Phone:	281-702-2329 Email:		Elliot.Lee@wsp.com, Anna.Byers@wsp.com

Work Order Comments

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

Project Name:	Tucker Draw	Turn Around	
Project Number:	31403360.009	Routine	X
P.O. Number:		Rush:	
Sampler's Name:	Elliot Lee	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	2.4/2.2	Thermometer ID	TNM007
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
BH01	S	10/28/2021	9:55	1'	X	X	X	X
BH01A	S	10/28/2021	10:30	5'	X	X	X	X
BH02	S	10/28/2021	11:10	1'	X	X	X	X
BH02A	S	10/28/2021	11:40	5'	X	X	X	X
BH03	S	10/28/2021	11:59	1'	X	X	X	X
BH03A	S	10/28/2021	12:27	5'	X	X	X	X
BH04	S	10/28/2021	13:10	2'	X	X	X	X
BH04A	S	10/28/2021	13:30	5'	X	X	X	X
BH05	S	10/28/2021	14:10	3'	X	X	X	X
BH05A	S	10/28/2021	14:25	5'	X	X	X	X

890-1504 Chain of Custody

Work Order Notes

Incident # NAPP2124237477

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

Sample Comments

Discrete

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

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			10.29.21 1330			
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Chain of Custody

XENCO LABORATORIES

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

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Joseph Hernandez	Bill to: (if different)	Jim Raley
Company Name:	WSP USA	Company Name:	WPX Energy
Address:	3300 North A Street	Address:	5315 Buena Vista Dr.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM, 88220
Phone:	281-702-2329	Email:	Elliot.Lee@wsp.com, Anna.Byers@wsp.com

Work Order Comments

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

Project Name:	Tucker Draw	Turn Around	
Project Number:	31403360.009	Routine ☐	
P.O. Number:		Rush:	
Sampler's Name:	Elliot Lee	Due Date:	

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
BH06	S	10/28/2021	14:50	1'	X	X	X	X	Discrete
BH06A	S	10/28/2021	15:20	5'	X	X	X	X	Discrete
BH07	S	10/28/2021	15:45	3'	X	X	X	X	Discrete
BH07A	S	10/28/2021	15:57	5'	X	X	X	X	Discrete

Work Order Notes

Incident # NAPP2124237477

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

ANALYSIS REQUEST

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		10-29-21 1300	2		
3			4		
5			6		

Revised Date 051418 Rev 2018 1

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-488.1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset com	State of Origin: New Mexico	Page: Page 1 of 2
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 890-1504-1
Address: 1211 W Florida Ave	Due Date Requested: 11/4/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Tucker Draw	Project #: 88000203			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Z	other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D/DI_LEACH Chloride	8015MOD_NM/8015NM_S_Prep Full TPH	8021B/5035FP_Calc BTEX	8015MOD_Calc	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
BH01 (890-1504-1)	10/28/21	09 55 Mountain		Solid			X	X	X	X	X	1	
BH01A (890-1504-2)	10/28/21	10 30 Mountain		Solid			X	X	X	X	X	1	
BH02 (890-1504-3)	10/28/21	11 10 Mountain		Solid			X	X	X	X	X	1	
BH02A (890-1504-4)	10/28/21	11 40 Mountain		Solid			X	X	X	X	X	1	
BH03 (890-1504-5)	10/28/21	11 59 Mountain		Solid			X	X	X	X	X	1	
BH03A (890-1504-6)	10/28/21	12 27 Mountain		Solid			X	X	X	X	X	1	
BH04 (890-1504-7)	10/28/21	13 10 Mountain		Solid			X	X	X	X	X	1	
BH04A (890-1504-8)	10/28/21	13 30 Mountain		Solid			X	X	X	X	X	1	
BH05 (890-1504-9)	10/28/21	14 10 Mountain		Solid			X	X	X	X	X	1	

Note. Since laboratory accreditations are subject to change Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

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

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by: 10·29	Date/Time	Company	Received by: kramer	Date/Time: 11·1·21	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 2.6/27

Ver: 06/08/2021

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-488 2
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 2 of 2
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 890-1504-1
Address: 1211 W Florida Ave	Due Date Requested: 11/4/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #			
Project Name: Tucker Draw	Project #: 88000203			
Site	SSOW#:			

Analysis Requested

Preservation Codes

A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D/DI_LEACH Chloride	8015MOD_NM/8015NM_S_Prep Full TPH	8021B/5035FP_Calc BTEX	8015MOD_Calc	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note
			Preservation Code:										
BH05A (890-1504-10)	10/28/21	14 25 Mountain		Solid			X	X	X	X	X	1	
BH06 (890-1504-11)	10/28/21	14 50 Mountain		Solid			X	X	X	X	X	1	
BH06A (890-1504-12)	10/28/21	15 20 Mountain		Solid			X	X	X	X	X	1	
BH07 (890-1504-13)	10/28/21	15 45 Mountain		Solid			X	X	X	X	X	1	
BH07A (890-1504-14)	10/28/21	15 57 Mountain		Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

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

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

Relinquished by: Che 10.29	Date/Time	Company	Received by: Kramer	Date/Time	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company

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

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1504-1
SDG Number: 31403360.009

Login Number: 1504
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: 890-1504-1
SDG Number: 31403360.009

Login Number: 1504
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland
List Creation: 11/01/21 08:46 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6/2.7
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	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 63675

CONDITIONS

Operator: WPX Energy Permian, LLC Devon Energy - Regulatory Oklahoma City, OK 73102	OGRID: 246289
	Action Number: 63675
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	None	12/22/2021