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 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	NAPP2132248577
District RP	
Facility ID	
Application ID	

# **Release Notification**

### **Responsible Party**

Responsible Party			OGRID	OGRID		
Contact Name			Contact Te	Contact Telephone		
Contact email I				Incident #	(assigned by OCD	)
Contact mail	ing address			1		
			Location	of Release So	ource	
Latitude				Longitude _		
			(NAD 83 in dec	cimal degrees to 5 decin	nal places)	
Site Name				Site Type		
Date Release	Discovered			API# (if app	olicable)	
Unit Letter	Section	Township	Range	Coun	nty	
Surface Owner	r: State	□ Fadaral □ Tr	ribal 🔲 Private ( <i>I</i>	Nama:		
Surface Owner	i. State		iloai 🔲 Fiivate (i	vame		
			Nature and	l Volume of l	Release	
	Material	(s) Released (Select al	ll that annly and attach	calculations or specific	justification for th	e volumes provided below)
Crude Oil		Volume Release		carculations of specific	Volume Reco	
Produced	Water	Volume Release	ed (bbls)		Volume Recovered (bbls)	
		Is the concentrat	tion of total dissolv	ved solids (TDS)	Yes N	No
	4.		$\frac{\text{water} > 10,000 \text{ mg}}{1.0111}$	:/1?	V. I D.	1/411)
Condensa		Volume Release			Volume Reco	
☐ Natural Gas Volume Released (Mcf)			Volume Reco	· · · ·		
Other (describe) Volume/Weight Released (provide unit		e units)	Volume/Wei	ght Recovered (provide units)		
G 07.1						
Cause of Rele	ease					

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State of New Mexico
Page 2
Oil Conservation Division

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Incident ID	NAPP2132248577
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Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the respon	nsible party consider this a major release?
☐ Yes ☐ No		
If YES, was immediate no	otice given to the OCD? By whom? To wh	om? When and by what means (phone, email, etc)?
	Initial Ro	esponse
The responsible	party must undertake the following actions immediatel	y unless they could create a safety hazard that would result in injury
☐ The source of the rele	ease has been stopped.	
☐ The impacted area ha	s been secured to protect human health and	the environment.
Released materials ha	ave been contained via the use of berms or c	ikes, absorbent pads, or other containment devices.
All free liquids and re	ecoverable materials have been removed and	d managed appropriately.
If all the actions described	d above have <u>not</u> been undertaken, explain	why:
Dog 10 15 20 9 D (4) NIM	[AC the magnetic leaves to the mountain many assume and a second	amodiation immediately often discovery of a valence. If namodiation
has begun, please attach	a narrative of actions to date. If remedial	emediation immediately after discovery of a release. If remediation efforts have been successfully completed or if the release occurred clease attach all information needed for closure evaluation.
		best of my knowledge and understand that pursuant to OCD rules and
public health or the environr	nent. The acceptance of a C-141 report by the C	fications and perform corrective actions for releases which may endanger DCD does not relieve the operator of liability should their operations have
		at to groundwater, surface water, human health or the environment. In responsibility for compliance with any other federal, state, or local laws
Printed Name:	<b>1</b> )	Title:
Signature:	rian Baks	Date:
email:		Telephone:
OCD Only		
Received by: Ramo	ona Marcus	Date: 11/18/2021

#### NAPP2132248577

Location:	Poker Lake Unit 423 TB		
Spill Date:	11/14/2021		
	Area 1		
Approximate A	rea =	719.00	sq. ft.
Average Satura	tion (or depth) of spill =	2.00	inches
Average Porosi	ty Factor =	0.03	
	VOLUME OF LEAK		
Total Crude Oil	=	0.00	bbls
<b>Total Produced</b>	Water =	20.64	bbls
	<b>TOTAL VOLUME OF LEAK</b>		
Total Crude Oil	=	0.00	bbls
Total Produced	Water =	20.64	bbls
	TOTAL VOLUME RECOVERED		
Total Crude Oil	=	0.00	bbls
Total Produced	Water =	20.00	bbls

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

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 62594

#### CONDITIONS

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	62594
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
rmarcus	None	11/18/2021

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Incident ID	NAPP2132248577	
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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?	<u>&gt; 100 (</u> 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 <b>not</b> 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.		

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
☐ Laboratory data including chain of custody

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

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Incident ID	NAPP2132248577
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I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release not public health or the environment. The acceptance of a C-141 report by the Gailed to adequately investigate and remediate contamination that pose a threaddition, OCD acceptance of a C-141 report does not relieve the operator of and/or regulations.	fications and perform c OCD does not relieve the eat to groundwater, surfa-	orrective actions for releases which may endanger e operator of liability should their operations have ace water, human health or the environment. In
Printed Name:Adrian Baker	Title:	Environmental Coordinator
Oldrion Baks Signature:		
Signature:	Date:	02/12/2022
Email:adrian.baker@exxonmobil.com	Telephone:	(432)-236-3808
OCD Only		
Received by:	Date:	

	Page 7 of 109
Incident ID	NAPP2132248577
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# Closure

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

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

A scaled site	e and sampling diagram as described in 19.1	5.29.11 NMAC		
	of the remediated site prior to backfill or p 2 days prior to liner inspection)	hotos of the liner integ	grity if applicable	(Note: appropriate OCD District office
☐ Laboratory	analyses of final sampling (Note: appropriat	e ODC District office	must be notified 2	2 days prior to final sampling)
□ Description	of remediation activities			
and regulations al may endanger pul should their opera human health or t compliance with a restore, reclaim, a	nat the information given above is true and call operators are required to report and/or file blic health or the environment. The acceptantions have failed to adequately investigate a the environment. In addition, OCD acceptarany other federal, state, or local laws and/or and re-vegetate the impacted surface area to 19.15.29.13 NMAC including notification to	certain release notification of a C-141 report by the contamination of a C-141 report directly of a C-	ations and perform by the OCD does re- nation that pose a oes not relieve the consible party ackn sted prior to the re-	n corrective actions for releases which not relieve the operator of liability threat to groundwater, surface water, e operator of responsibility for nowledges they must substantially elease or their final land use in
Printed Name:	Adrian Baker	Title:	Environmer	ntal Coordinator
Signature:	Cabrion Baks adrian.baker@exxonmobil.com	Date:	02/12/2022	2
email:	adrian.baker@exxonmobil.com	Teleph	one:	(432)-236-3808
OCD Only				
Received by:		Date: _		
remediate contam	by the OCD does not relieve the responsible ination that poses a threat to groundwater, succe with any other federal, state, or local law	rface water, human he		
Closure Approved	d by:Jennifer Nobui	Date:	02/16/2022	
Printed Name:	Jennifer Nobui	Title:	Environment	al Specialist A
			<del></del>	

wsp

WSP USA

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

February 9, 2022

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

RE: Closure Request
Poker Lake Unit 423
Incident Number nAPP2132248577
Eddy County, New Mexico

To Whom it May Concern:

WSP USA Inc. (WSP) on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, excavation, and soil sampling activities at the Poker Lake Unit (PLU) 423 (Site) in Unit I, Section 19, Township 25 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, excavation, and soil sampling activities was to address impacts to soil following the release of produced water at the Site. Based on the excavation activities and soil sample laboratory analytical results, XTO is submitting this Closure Request, and requesting no further action (NFA) for Incident Number nAPP2132248577.

#### **RELEASE BACKGROUND**

On November 14, 2021, corrosion on the 4-inch main water dump line resulted in the release of 20.64 barrels (bbls) of produced water onto the well pad. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 20 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on November 18, 2021. The release was assigned Incident Number nAPP2132248577.

#### SITE CHARACTERIZATION

WSP characterized the Site according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is greater than 100 feet below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. On February 4, 2020, WSP installed a soil boring (C-4394) within 0.5 miles of the Site utilizing a sonic drilling rig. Soil boring C-4394 was drilled to a depth of 110 feet bgs. A WSP geologist logged and described soils continuously. The borehole lithologic/soil sampling log is included in Attachment 1. No moisture or groundwater was encountered during drilling activities. The location of the borehole is approximately 192 feet southwest of the Site and is depicted on Figure 1. The



borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 110 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips.

The closest continuously flowing or significant watercourse to the Site is an intermittent stream, located approximately 900 feet west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

#### **CLOSURE CRITERIA**

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

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

#### SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On December 22, 2021, WSP personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Two preliminary assessment samples (SS01 and SS02) were collected within the release extent from a depth of 0.5 feet bgs to assess the lateral extent of impacted soil. Soil from the preliminary soil samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

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



DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for preliminary soil sample SS01 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for preliminary soil sample SS02 indicated that chloride concentrations exceeded the Closure Criteria; benzene, BTEX, TPH-GRO/TPH-DRO, and TPH concentrations were compliant with the Closure Criteria. Based on visual observations, field screening activities, and laboratory analytical results for the preliminary soil samples, delineation and excavation activities were warranted

#### **DELINEATION ACTIVITES AND ANALYTICAL RESULTS**

On January 18, 2022, WSP personnel returned to the Site to oversee delineation and excavation activities as indicated by visual observations, field screening activities, and laboratory analytical results for the preliminary soil samples.

Potholes PH01 and PH02 were advanced via backhoe within the release extent to a depth of 2 feet bgs to assess the vertical extent of impacted soil. Discrete delineation samples were collected from each pothole (PH01/PH01A and PH02/PH02A) at depths of 1-foot and 2 feet bgs. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations were logged on lithologic/soil sampling logs, which are included in Attachment 2. Additionally, soil samples SS03 through SS07 were collected from a depth of 0.5 feet bgs around the release extent to confirm the lateral extent of the release. The pothole and delineation soil sample locations are depicted on Figure 3. The delineation soil samples were collected, handled, and analyzed as described above at Eurofins in Carlsbad, New Mexico.

Laboratory analytical results for pothole delineation samples PH01/PH01A and PH02/PH02A indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for soil samples SS03 through SS07, collected around the release extent, indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the most stringent Table 1 Closure Criteria.

#### **EXCAVATION ACTIVITIES AND ANALYTICAL RESULTS**

On January 18, 2022, upon completion of delineation activities, excavation was completed to remove surficial staining in the release footprint and remove impacted soil in the area surrounding preliminary soil sample SS02. Excavation activities were performed using a backhoe and hydro-vacuum. To direct excavation activities, WSP screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. The excavation was completed to an approximate depth of 1-foot bgs.



Following removal of impacted soil, WSP collected 5-point composite soil samples every 200 square feet from the floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS04 were collected from the floor of the excavation, from a depth of 1-foot bgs. Due to the shallow depth of the excavation, the soil samples represented the floor and sidewalls of the excavation. The excavation soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 4. Photographic documentation was completed during the Site visits and a photographic log is included in Attachment 3.

Laboratory analytical results for excavation soil samples FS01 through FS04 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

The excavation area measured approximately 678 square feet. A total of approximately 25 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Hobbs, New Mexico. After completion of confirmation sampling, the excavation area was backfilled.

#### **CLOSURE REQUEST**

Site assessment and excavation activities were conducted at the Site to address the November 14, 2021 release of produced water. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Additionally, the release extent was laterally delineated to below the most stringent Table 1 Closure Criteria. Based on the soil sample analytical results, no further remediation was required. XTO backfilled the excavation with material purchased locally and recontoured the Site to match pre-existing site conditions.

Initial response efforts and excavation of impacted soil have mitigated impacts at the Site. Depth to groundwater has been determined to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extent. WSP and XTO believe these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests no further action for Incident Number nAPP2132248577.



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

Linée Cole

Sincerely,

WSP USA Inc.

Nihaar Katoch Assistant Consultant, Geologist Aimee Cole Senior Consultant, Environmental Scientist

cc: Shelby Pennington, XTO

Adrian Baker, XTO

**Bureau of Land Management** 

#### Attachments:

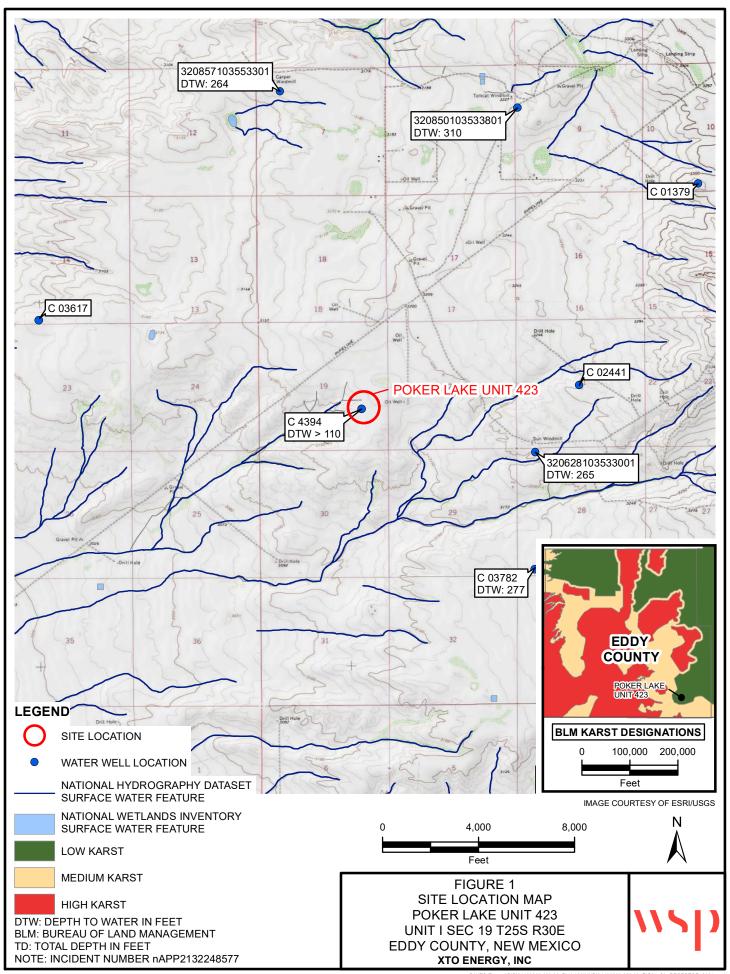
Figure 1 Site Location Map

Figure 2 Preliminary Soil Sample Locations
Figure 3 Delineation Soil Sample Locations
Figure 4 Excavation Soil Sample Locations

Table 1 Soil Analytical Results
Attachment 1 Referenced Well Records
Attachment 2 Lithologic/Sampling Logs

Attachment 3 Photographic Log

Attachment 4 Laboratory Analytical Reports





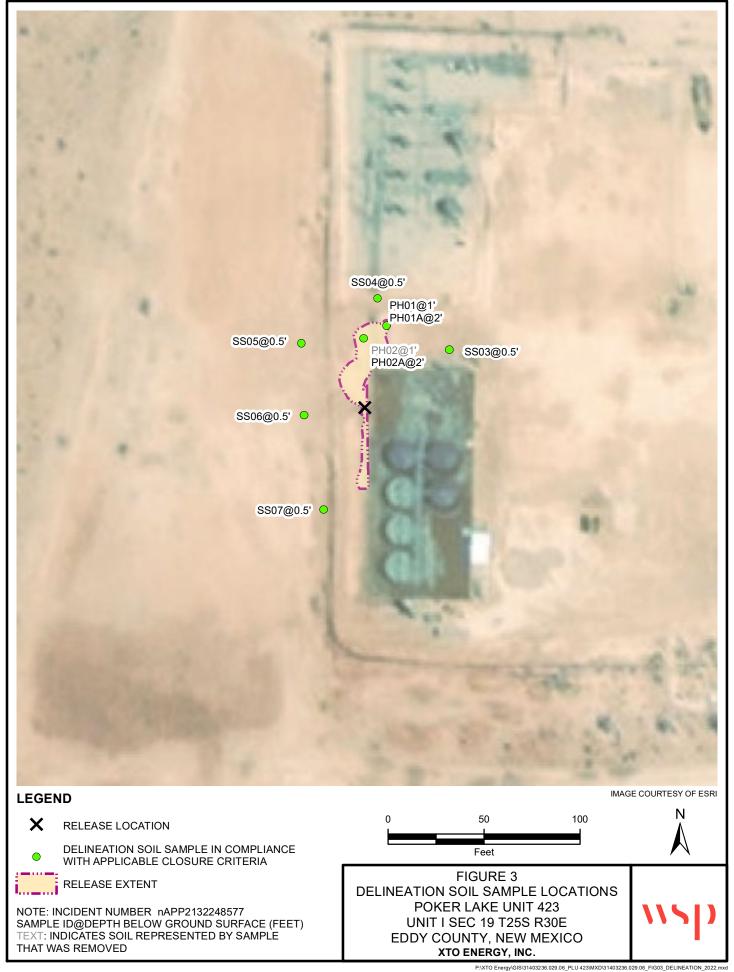




Table 1

# Soil Analytical Results Poker Lake Unit 423 Incident Number: nAPP2132248577 Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table	1 Closure Criteria	(NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
Preliminary Soil S	Samples									
SS01	12/22/2021	0.5	< 0.00199	< 0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	9,400
SS02	12/22/2021	0.5	< 0.00200	< 0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	31,600
Delineation Soil S	Samples									
SS03	01/18/2022	0.5	< 0.00199	< 0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	12.1
SS04	01/18/2022	0.5	< 0.00200	< 0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	17.4
SS05	01/18/2022	0.5	< 0.00201	< 0.00402	<50.0	<50.0	<50.0	< 50.0	<50.0	18.2
SS06	01/18/2022	0.5	< 0.00202	< 0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	17.7
SS07	01/18/2022	0.5	< 0.00200	< 0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	15.2
PH01	01/18/2022	1	< 0.00200	< 0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	154
PH01A	01/18/2022	2	< 0.00199	< 0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	221
PH02	01/18/2022	1	< 0.00199	< 0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	2,720
PH02A	01/18/2022	2	< 0.00201	< 0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	690
Excavation Soil S	Samples									
FS01	01/18/2022	1	< 0.00199	< 0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	726
FS02	01/18/2022	1	< 0.00202	< 0.00404	<50.0	<50.0	<50.0	< 50.0	<50.0	6,170
FS03	01/18/2022	1	< 0.00200	< 0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	160
FS04	01/18/2022	1	< 0.00201	< 0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	613

#### **Notes:**

ft - feet/foot

mg/Kg - milligrams per kilogram

bgs - below ground surface

GRO - Gasoline range organics

DRO - Diesel range organics

ORO - Oil range organics

BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes

TPH - Total petroleum hydrocarbons

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

NE - Not Established

NMOCD - New Mexico Oil Conservation Division

NMAC - New Mexico Administrative Code

**BOLD** - indicates results exceed the higher of the background sample result or applicable regulatory standard Greyed data represents samples that were excavated

Atlensin	mmental, Inc.	ω'i	Ca	508 We: rlsbad, i	ironment st Stevens New Mexi Engineering	s Street co 8822			Identifier:  MWOLC4  Project Name:		Date: 2/4/20 RP Number: 2RP - 379	4	
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Lat/Long	:				Field Scree	ening <del>: CHL</del>	ORIDES, P	ID.	Hole Diameter: 4"/6	("	Total Depth:		
Commen	ts: No	sam	Plin	a. l.	thola	201/5	emar	Ks on		, , , , , , , , , , , , , , , , , , ,			
Moisture Content	Chloride (ppm)		50	Sample #		Sample	Rock		/	ology/Rem	arks		
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-			2 10.0	9:17 A.			Jan 2017				Page 2
LT Enviro	onmental, Inc.		Ca	508 Wes Irlsbad, I					Identifier:  MW0 1 C 43  Project Name:	56	Date: 2/4/2020  RP Number: 2RP-2674 2RP-3790
	¥	LITHO	OLOGIC	C /SOII	L SAMP	LING LO	OG.		Logged By: FS		Method: SONIC
Lat/Lon	g:	Lilli	2001			ening <del>: CHL</del>		PID.	Hole Diameter: 44/6		Total Denth:
Comme	nts:		n = 1						1/6	3	110'
						-				/	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)		Soil/Rock Type		Lithol	logy/Rema	arks
٥		-	7		26 ] 27 _ 28 _ 29 _	-	SP		tan, pe fine-ve	portions ery fi	r, light brun- y graded, negrey-grey bles (gravel),
D	-		7	2)	30 _			31'	calich		and and the state of the state
D			2		32 - 33 - 34			31.	5' color	r ch bru	ange in-Teoldish
m	100	14	7 2	directo	35		SW-S		JJ Chu	221 01	ant ss mod consol absent
m				Þ	37 38 39				laminati	200	few pebbles, frounded, ey, few w/clay,
M		*	N		40   41		Y	47 E		100	olomite"
M			N		42   43				clay la trace, re	adis	h penu
M	No.		N		44	2	2000	, -	gons ILTY SO	sand,	light brun- light brun
D			N	112 h. s	47 48		/)		cohesive lay nod	trac	reddish
D			7	ς	49 +	,		49,5	lowplas c	low	band, orange band,

Released to Imaging: ,2/16/2022 12:59:48 PM

paren	mental, inc.		508 We	vironmental, est Stevens S New Mexico	Street	0	Identifier:
2	5	Co	mpliance ·	Engineering ·	Remed	iation	PLU 423 ZRP-3790
		LITHOLOG	GIC / SO	IL SAMPLI			Logged By: FS Method: SONIC  Hole Diameter: 1/1/4 Total Depth: 1101
Lat/Long				Field Screenin	ilg. <del>Clic</del>	SKIDES, F	Hole Diameter: 4 /6 Total Depth: 110'
Commen	ıs:						
Moisture Content	Chloride (ppm)	Vapor (ppm)	Sample #		ample Depth	Soil/Rock Type	Lithology/Remarks
P			1	51 1 52 -		5P/E	51.5' trace, high plas clay
D		_	1	53 1			53-54' some silty ss poorty consolidated 55.5' color change fan -
M		N		55   56	-		grey band (30mm)
M		N		57   58   7	X		59.5' SILTY sand, light brun-brun, moist, no plas, non cohesive, no stain
W		N	,	60	j	sm	no stain 102' more consolidated
D		N		61	5	s m-s	64' dark brwn color change, silfy clay nodules 60' pockets of silty
m		N	2	65 + 66 + 66			some, few low plas clay laminations
m		7		68			71' SILTY sand, dry,
M		7		69 70			no plos, non cohesive, light brun-tan 141 trace caliche pebbles,
D		N		71	5	SM.	light grey - grey
D		2		73 74 75	,		

eu by OCL	. 2/11/2022	10.07.17 AM	1 4 2 2 4 0 )
LTP LT Environmental, Inc. Assay dented.	: 5 Car	LT Environmental, Inc.  108 West Stevens Street  1sbad, New Mexico 88220  1ance · Engineering · Remediation	Identifier:   Date:   2/4/2020
		/SOIL SAMPLING LOG	Logged By: FS, \$B Method: sonic
Lat/Long:	Elinopodic	Field Screening: CHLORIDES, PID.	Hole Diameter: / // // Total Depth:
Comments:			6/4" 110'
Moisture Content Chloride (ppm)	Vapor (ppm) Staining	"Bepth   Sample   Soil/Rock   Type   Sample   Soil/Rock   Type   Soil/Rock   S	Lithology/Remarks
D.	N	77	nodules reddish brun 821 CLAYS, moist, brun-
D		79	plasticity, cohosive,
D	N	I 🛎 TI I I	mod consolidated  SILTY sand, dry,
m	N	82 63 CL-S	no plas, non cohosive, no stain, no odor
D		84 85 86	87" color change tan-
D	N	€ 187 m.c	37' SILTSTONE, dry,
D	N	12 1140	which ay pockets, to we plas
6	N		11' abundant clay pockets 14.5' band yellow low plas clay
	3 -	94 sm	
m	N	196 95-1	5/20 01 CLAY, maist, brown - dark brown,
m	N	97   Nig	winations, no stein an alex
D	N	99	99' ten fire gran smalstone stringer

LT Environme	ental, Inc.		5 Car	i08 Wes Isbad, I	ironmenta st Stevens New Mexic Engineering	Street to 8822			Identifier:  MWC  Project Name:	C 4394	Date: 7/5/2020  RP Number: 289-3790
-		LITHO	LOCIC	SOL	L SAMPI	INCL	nc .		Logged By: (6)		Method: Sonie
Lat/Long:		Lilio	LOGIC	7 501.	Field Scree			ID.	Hole Diameter: . "	1 11	Total Depth:
									6	/4"	110
Comments:											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		L	ithology/Ren	narks
					101	Ц.	CH	\01'-	1001 0	1 . A Ctn 4/5	Fa Pasks
0			N		102	-	SP-S				ten-light bour,
								Or	4, moderat	thy considi	idated, culcurrous
			<b>"</b>		103 -	-		0	mented, po	porly grad	ed, no strik,
					104			^	so oder.		
			Y		105			105'-	110' CW	AY ~~	tiduk bown -
			,		103		CH	bn	wn hick	1 Ach	, cohesine, trum
M			M		106			tru	Send 1	of the state of	, cousin, Them
			N		107			60	ler	na Flons	, no Stain, no
'			,,		108				2		11
			N		108			w7 -	109' tan	-1:5H bi	own well
"					109			l	ansilidated	fine gr	im sends the
m			~		110			1	Anhyer,		,
					111		TOAID				
					'''	1		+	D & 110'		16
					112	-		1	0 6 110		
1 1					113		1				
					114						
					'''		1				,
					115	-	5				,
					116						
					117						
					I						
					118		0				
					119						
					120						
					I						
					121						
					122						
					123						
					I						
					124						
					125			4.00			



USGS Home Contact USGS Search USGS

#### **National Water Information System: Web Interface**

<b>USGS</b> Water Resources	(Connerator Access)	Data Category:		Geographic Area:		
obdb Water Resources	(Cooperator Access)	Groundwater	~	United States	~	GO

#### Click to hideNews Bulletins

- Explore the NEW <u>USGS National Water Dashboard</u> interactive map to access realtime water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for the Nation

Important: <u>Next Generation Monitoring Location Page</u>

#### Search Results -- 1 sites found

site\_no list =

320628103533001

#### Minimum number of levels = 1

Save file of selected sites to local disk for future upload

#### USGS 320628103533001 25S.30E.21.333424

Available data for this site Groundwater: Field measurements GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°06'28", Longitude 103°53'30" NAD27
Land-surface elevation 3,207 feet above NAVD88

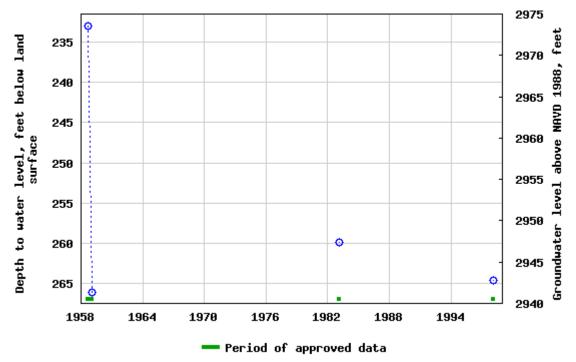
The depth of the well is 288 feet below land surface.

This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

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

#### USGS 320628103533001 255,30E,21,333424



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

Questions about sites/data?
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U.S. Department of the Interior | U.S. Geological Survey

**Title: Groundwater for USA: Water Levels** 

URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: <u>USGS Water Data Support Team</u>

Page Last Modified: 2022-02-03 13:07:48 EST

0.69 0.61 nadww02



7	11	ς i	)		W	SP USA			BH or PH Name: PH01		Date: 1/18/2022
	• •				508 West	Stevens St	reet		Site Name: PLU 423	:	
				Ca	ırlsbad, N	ew Mexico	88220		RP or Incident Number: nA		2248577
									WSP Job Number: 314032		
		LITH	lOLO	GIC / SOI		LING LOG	ì		Logged By: AC		Method: Backhoe
Lat/Lo		015401			Field Scre				Hole Diameter:		Total Depth:
	3025, -103		ld scree	ninge includ	TPH, Chlo	orides orrection facto	)r		N/A		2 feet bgs
	ist; D-dry; \			anniga meruu	e a 40 % cc	medion facio	η.				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)		USC				emarks
					1	0	CCHE		LICHE, dry, tan, poorl	y conso	olidated, no stain, no odor,
D	274.4	0.1	Ν	PH01	1 -	1	SP	fill.	ND dry light brown-h	rown r	poorly graded, fine-very fine
	214.4	0.1	IN	F1101	' -	- '	Si		, no stain, no odor.	JiOwii, p	bootiy graded, iiile-very liile
D	364.0	1.6	Ν	PH01A	2	2		gram	, no otam, no odon		
					_						
							TD @	2 feet b	gs		

	119	<u></u>	1		W	SP USA		BH or PH Name: PH02		Date: 1/18/2022
					508 West	Stevens St	reet	Site Name: PLU 423		
				Ca	rlsbad, N	ew Mexico	88220	RP or Incident Number:	nAPP21322	248577
								WSP Job Number: 3140	03236.029	
		LITH	IOLO	GIC / SOI	L SAMP	LING LOG	<b>;</b>	Logged By: AC		Method: Backhoe
Lat/Lo		045440			Field Scre			Hole Diameter:		Total Depth:
	3006, -103.9		d scro	ninge includ	TPH, Chlo	orides orrection facto	)r	N/A		2 feet bgs
	oist; D-dry; Y			eriirigs iriciuu	e a 40 % CC	mection facto	л.			
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	bgs)	uscs Syn		hology/Re	
					1	0	CCHE	0-1', CALICHE, dry, tan, poo	orly conso	lidated, no stain, no odor,
D	2,951.2	0.0	N	PH02	1 -	1	SP	fill. 1'-2', SAND, dry, light brown	n-brown n	poorly graded fine-very fine
	2,001.2	0.0	11	11102	' -	_ '	O1	grain, no stain, no odor.	i biowii, p	oony graded, fine very fine
D	2,206.4	0.0	Ν	PH02A	2	2				
$\vdash$							TD @	2 feet bgs		
$\parallel$							10 @	s 2 100t bg3		



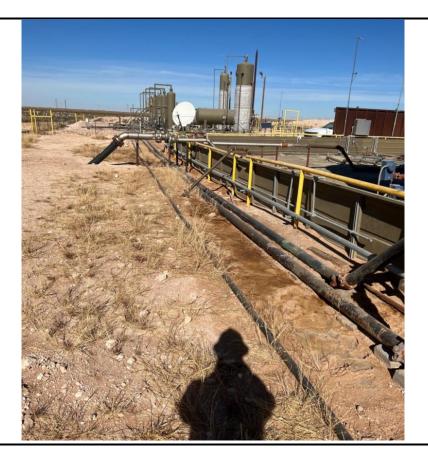
	PHOTOGRAPHIC LOG	
XTO Energy, Inc.	POKER LAKE UNIT 423	NAPP2132248577
	EDDY COUNTY, NEW MEXICO	

Photo No.	Date	
1	November 22,	
1	2021	
View facing south of release extent		
during initial site assessment		



Photo No.	Date	
2	November 22,	
Z	2021	
T T! C !	1 0 1	

View facing north of release extent during initial site assessment





	PHOTOGRAPHIC LOG	
XTO Energy, Inc.	POKER LAKE UNIT 423	NAPP2132248577
	EDDY COUNTY, NEW MEXICO	

Photo No. Date
3 January 18, 2022
View facing south of excavation

activities

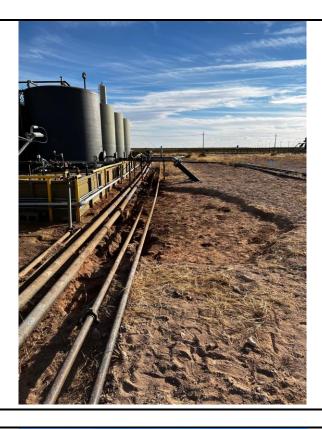


Photo No. Date
4 January 18, 2022
View facing north of excavation

activities





# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-1752-1

Laboratory Sample Delivery Group: 31403236.029

Client Project/Site: PLU 423

For:

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

Attn: Benjamin Belill

JURAMER

Authorized for release by: 1/4/2022 2:17:38 PM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

LINKS

Review your project results through

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www.eurofinsus.com/Env

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//

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

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

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Client: WSP USA Inc.

Project/Site: PLU 423

Laboratory Job ID: 890-1752-1

SDG: 31403236.029

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## **Definitions/Glossary**

 Client: WSP USA Inc.
 Job ID: 890-1752-1

 Project/Site: PLU 423
 SDG: 31403236.029

#### **Qualifiers**

GC VOA

 Qualifier
 Qualifier Description

 F1
 MS and/or MSD recovery exceeds control limits.

U Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

\*+ LCS and/or LCSD is outside acceptance limits, high biased.
U Indicates the analyte was analyzed for but not detected.

**HPLC/IC** 

F1 MS and/or MSD recovery exceeds control limits.

U Indicates the analyte was analyzed for but not detected.

**Glossary** 

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery

CFL Contains Free Liquid

CFU Colony Forming Unit

CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

 NEG
 Negative / Absent

 POS
 Positive / Present

 PQL
 Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

Eurofins Xenco, Carlsbad

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#### **Case Narrative**

Client: WSP USA Inc. Job ID: 890-1752-1 Project/Site: PLU 423 SDG: 31403236.029

Job ID: 890-1752-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-1752-1

#### Receipt

The samples were received on 12/23/2021 9:57 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 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

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

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

#### HPLC/IC

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

# **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-1752-1 Project/Site: PLU 423 SDG: 31403236.029

**Client Sample ID: SS01** 

Lab Sample ID: 890-1752-1 Date Collected: 12/22/21 13:33 Matrix: Solid Date Received: 12/23/21 09:57

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U	0.00199	mg/Kg		01/03/22 08:26	01/03/22 19:18	
Toluene	<0.00199	U	0.00199	mg/Kg		01/03/22 08:26	01/03/22 19:18	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/03/22 08:26	01/03/22 19:18	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/03/22 08:26	01/03/22 19:18	
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/03/22 08:26	01/03/22 19:18	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/03/22 08:26	01/03/22 19:18	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	103		70 - 130			01/03/22 08:26	01/03/22 19:18	
1,4-Difluorobenzene (Surr)	107		70 - 130			01/03/22 08:26	01/03/22 19:18	
Method: Total BTEX - Total BTEX	( Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/03/22 13:25	
Analyte Total TPH	<49.9	Qualifier U	<b>RL</b> 49.9	mg/Kg	D	Prepared	Analyzed 01/03/22 13:55	Dil Fa
			10.0	mg/rtg			01/00/22 10:00	
Method: 8015B NM - Diesel Rang					_			
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		12/28/21 13:53	12/29/21 14:42	
Diesel Range Organics (Over	<49.9	[] *+	49 9	ma/Ka		12/28/21 13:53	12/29/21 14:42	
	<49.9	U *+	49.9	mg/Kg		12/28/21 13:53	12/29/21 14:42	
Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<49.9 <49.9		49.9 49.9	mg/Kg mg/Kg		12/28/21 13:53 12/28/21 13:53	12/29/21 14:42 12/29/21 14:42	
C10-C28) Oll Range Organics (Over C28-C36)		U						Dil Fa
C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	<49.9	U	49.9			12/28/21 13:53	12/29/21 14:42	
C10-C28)	<49.9 <b>%Recovery</b>	U	49.9			12/28/21 13:53  Prepared	12/29/21 14:42  Analyzed	
C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	<49.9 **Recovery 114 115	U Qualifier	49.9  Limits  70 - 130			12/28/21 13:53  Prepared  12/28/21 13:53	12/29/21 14:42  Analyzed  12/29/21 14:42	Dil Fa
C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	<49.9  **Recovery 114 115  Dimatography -	U Qualifier	49.9  Limits  70 - 130		<u>D</u>	12/28/21 13:53  Prepared  12/28/21 13:53	12/29/21 14:42  Analyzed  12/29/21 14:42	

**Client Sample ID: SS02** Lab Sample ID: 890-1752-2

Date Collected: 12/22/21 13:37 Date Received: 12/23/21 09:57

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/03/22 08:26	01/03/22 19:39	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/03/22 08:26	01/03/22 19:39	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/03/22 08:26	01/03/22 19:39	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		01/03/22 08:26	01/03/22 19:39	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/03/22 08:26	01/03/22 19:39	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/03/22 08:26	01/03/22 19:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			01/03/22 08:26	01/03/22 19:39	1

Eurofins Xenco, Carlsbad

Matrix: Solid

# **Client Sample Results**

 Client: WSP USA Inc.
 Job ID: 890-1752-1

 Project/Site: PLU 423
 SDG: 31403236.029

Project/Site: PLU 423 SDG: 31403236.029

Client Sample ID: SS02 Lab Sample ID: 890-1752-2

Date Collected: 12/22/21 13:37

Date Received: 12/23/21 09:57

Matrix: Solid

Sample Depth: 0.5

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	89		70 - 130			01/03/22 08:26	01/03/22 19:39	1
Method: Total BTEX - Total BTEX	( Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			01/03/22 13:25	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/03/22 13:55	1
Method: 8015B NM - Diesel Ranç Analyte	Result	Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		12/28/21 13:53	12/29/21 15:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9	mg/Kg		12/28/21 13:53	12/29/21 15:03	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/28/21 13:53	12/29/21 15:03	,
		0	Limits			Prepared	Analyzed	Dil Fac
Surrogate	%Recovery	Quaimer	Lillits					
		Quaimer	70 - 130			12/28/21 13:53	12/29/21 15:03	1
Surrogate 1-Chlorooctane o-Terphenyl	_ <u> </u>	Quaimer				12/28/21 13:53 12/28/21 13:53	12/29/21 15:03 12/29/21 15:03	1
1-Chlorooctane o-Terphenyl	114		70 - 130					1
1-Chlorooctane	114 113 omatography -		70 - 130	Unit	D			1 1 Dil Fac

# **Surrogate Summary**

Client: WSP USA Inc. Job ID: 890-1752-1 Project/Site: PLU 423 SDG: 31403236.029

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Rec
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-9746-A-4-F MS	Matrix Spike	106	101	
880-9746-A-4-G MSD	Matrix Spike Duplicate	101	95	
890-1752-1	SS01	103	107	
890-1752-2	SS02	114	89	
LCS 880-15695/1-A	Lab Control Sample	121	105	
LCSD 880-15695/2-A	Lab Control Sample Dup	123	113	
MB 880-15695/5-A	Method Blank	112	102	
Surrogate Legend				
BFB = 4-Bromofluorober	nzene (Surr)			
DFBZ = 1,4-Difluorobenz	zene (Surr)			

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

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

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-1751-A-1-B MS	Matrix Spike	110	93	
890-1751-A-1-C MSD	Matrix Spike Duplicate	110	93	
890-1752-1	SS01	114	115	
890-1752-2	SS02	114	113	

OTPH = o-Terphenyl

1CO = 1-Chlorooctane OTPH = o-Terphenyl

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

Matrix: Solid Prep Type: Total/NA

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

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Client: WSP USA Inc. Job ID: 890-1752-1 Project/Site: PLU 423 SDG: 31403236.029

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-15695/5-A

Lab Sample ID: LCS 880-15695/1-A

**Matrix: Solid** 

Analysis Batch: 15845

**Matrix: Solid** Analysis Batch: 15845 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 15695

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/03/22 08:26	01/03/22 12:28	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/03/22 08:26	01/03/22 12:28	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/03/22 08:26	01/03/22 12:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/03/22 08:26	01/03/22 12:28	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/03/22 08:26	01/03/22 12:28	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/03/22 08:26	01/03/22 12:28	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	01/03/22 08:26	01/03/22 12:28	1
1,4-Difluorobenzene (Surr)	102		70 - 130	01/03/22 08:26	01/03/22 12:28	1

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 15695

LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.07196 mg/Kg 72 70 - 130 Toluene 0.100 0.07285 mg/Kg 73 70 - 130 0.100 75 Ethylbenzene 0.07540 mg/Kg 70 - 130 0.200 77 70 - 130 m-Xylene & p-Xylene 0.1547 mg/Kg 0.100 0.08083 70 - 130 o-Xylene mg/Kg

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	121	70 - 130
1,4-Difluorobenzene (Surr)	105	70 - 130

Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

Analysis Batch: 15845

Lab Sample ID: LCSD 880-15695/2-A

Prep Type: Total/NA Prep Batch: 15695

Spike	LCSD	LCSD				%Rec.		RPD
Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
0.100	0.07588		mg/Kg		76	70 - 130	5	35
0.100	0.07630		mg/Kg		76	70 - 130	5	35
0.100	0.07958		mg/Kg		80	70 - 130	5	35
0.200	0.1648		mg/Kg		82	70 - 130	6	35
0.100	0.08517		mg/Kg		85	70 - 130	5	35
	Added 0.100 0.100 0.100 0.100 0.200	Added         Result           0.100         0.07588           0.100         0.07630           0.100         0.07958           0.200         0.1648	Added         Result         Qualifier           0.100         0.07588           0.100         0.07630           0.100         0.07958           0.200         0.1648	Added         Result         Qualifier         Unit           0.100         0.07588         mg/Kg           0.100         0.07630         mg/Kg           0.100         0.07958         mg/Kg           0.200         0.1648         mg/Kg	Added         Result         Qualifier         Unit         D           0.100         0.07588         mg/Kg           0.100         0.07630         mg/Kg           0.100         0.07958         mg/Kg           0.200         0.1648         mg/Kg	Added         Result         Qualifier         Unit         D         %Rec           0.100         0.07588         mg/Kg         76           0.100         0.07630         mg/Kg         76           0.100         0.07958         mg/Kg         80           0.200         0.1648         mg/Kg         82	Added         Result         Qualifier         Unit         D         %Rec         Limits           0.100         0.07588         mg/Kg         76         70 - 130           0.100         0.07630         mg/Kg         76         70 - 130           0.100         0.07958         mg/Kg         80         70 - 130           0.200         0.1648         mg/Kg         82         70 - 130	Added         Result         Qualifier         Unit         D         %Rec         Limits         RPD           0.100         0.07588         mg/Kg         76         70 - 130         5           0.100         0.07630         mg/Kg         76         70 - 130         5           0.100         0.07958         mg/Kg         80         70 - 130         5           0.200         0.1648         mg/Kg         82         70 - 130         6

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	123		70 - 130
1.4-Difluorobenzene (Surr)	113		70 - 130

Lab Sample ID: 880-9746-A-4-F MS

**Matrix: Solid** 

Analysis Batch: 15845

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

Prep Batch: 15695

		Sample	Sample	Spike	MS	MS				%Rec.	
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
	Benzene	<0.00200	U F1	0.100	0.07063		mg/Kg		70	70 - 130	
ı	Toluene	<0.00200	U F1	0.100	0.06888	F1	mg/Kg		69	70 - 130	

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# **QC Sample Results**

Client: WSP USA Inc. Job ID: 890-1752-1 Project/Site: PLU 423 SDG: 31403236.029

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

Lab Sample ID: 880-9746-A-4-F MS Client Sample ID: Matrix Spike Prep Type: Total/NA

**Matrix: Solid** 

Analysis Batch: 15845										Batch: 15695
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00200	U	0.100	0.07657		mg/Kg		76	70 - 130	
m-Xylene & p-Xylene	<0.00399	U	0.201	0.1580		mg/Kg		79	70 - 130	
o-Xylene	<0.00200	U	0.100	0.08073		mg/Kg		80	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	106	70 - 130
1,4-Difluorobenzene (Surr)	101	70 - 130

Lab Sample ID: 880-9746-A-4-G MSD Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA

**Matrix: Solid** 

Analysis Batch: 15845									Prep	Batch:	15695
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U F1	0.0990	0.06583	F1	mg/Kg		66	70 - 130	7	35
Toluene	<0.00200	U F1	0.0990	0.06630	F1	mg/Kg		67	70 - 130	4	35
Ethylbenzene	<0.00200	U	0.0990	0.06951		mg/Kg		70	70 - 130	10	35
m-Xylene & p-Xylene	<0.00399	U	0.198	0.1446		mg/Kg		73	70 - 130	9	35
o-Xylene	<0.00200	U	0.0990	0.07205		mg/Kg		73	70 - 130	11	35

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

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

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

Analysis Batch: 15677

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/28/21 13:53	12/29/21 10:02	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/28/21 13:53	12/29/21 10:02	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/28/21 13:53	12/29/21 10:02	1

MB MB

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

Lab Sample ID: LCS 880-15659/2-A

Matrix: Solid

Analysis Batch: 15677							Prep	Batch: 15659
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1088		mg/Kg		109	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1110		mg/Kg		111	70 - 130	
C10-C28)								

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Prep Type: Total/NA

**Client Sample ID: Lab Control Sample** 

Prep Batch: 15659

Client: WSP USA Inc. Job ID: 890-1752-1 Project/Site: PLU 423 SDG: 31403236.029

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

LCS LCS

%Recovery Qualifier

Lab Sample ID: LCS 880-15659/2-A

Limits

**Matrix: Solid** 

**Analysis Batch: 15677** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Prep Batch: 15659

1-Chlorooctane 100 70 - 130 o-Terphenyl 96 70 - 130

Lab Sample ID: LCSD 880-15659/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

Analysis Batch: 15677

Prep Type: Total/NA

Prep Batch: 15659

Spike LCSD LCSD %Rec. RPD Analyte Added Result Qualifier Unit D %Rec Limits **RPD** Limit 1000 1188 119 70 - 1309 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 1311 \*+ 131 mg/Kg 70 - 13017 20

C10-C28)

Surrogate

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

Lab Sample ID: 890-1751-A-1-B MS Client Sample ID: Matrix Spike

**Matrix: Solid** 

**Analysis Batch: 15677** 

Prep Type: Total/NA

Prep Batch: 15659

Sample Sample MS MS Spike Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits Gasoline Range Organics <49.9 UF1 1990 2008 mg/Kg 101 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 64.4 F1 \*+ 1990 1989 mg/Kg 97 70 - 130 C10-C28)

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

Lab Sample ID: 890-1751-A-1-C MSD Client Sample ID: Matrix Spike Duplicate

**Analysis Batch: 15677** 

**Matrix: Solid** 

Prep Type: Total/NA

Prep Batch: 15659

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

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

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Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Client Sample ID: Matrix Spike Duplicate

Client Sample ID: Matrix Spike Duplicate

**Prep Type: Soluble** 

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike

Client: WSP USA Inc. Job ID: 890-1752-1 Project/Site: PLU 423 SDG: 31403236.029

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-15694/1-A

**Matrix: Solid** 

Analysis Batch: 15818

MB MB

Analyte Result Qualifier RLUnit D Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 mg/Kg 12/30/21 23:40

Lab Sample ID: LCS 880-15694/2-A

**Matrix: Solid** 

**Analysis Batch: 15818** 

Spike LCS LCS %Rec. Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 259.4 mg/Kg 104 90 - 110

Lab Sample ID: LCSD 880-15694/3-A

**Matrix: Solid** 

Analysis Batch: 15818

Spike LCSD LCSD %Rec. RPD Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 260.1 mg/Kg 104 90 - 110

Lab Sample ID: 890-1751-A-1-F MS

**Matrix: Solid** 

**Analysis Batch: 15818** 

Sample Sample MS MS Spike %Rec. Result Qualifier Result Qualifier Added Analyte Unit %Rec Limits 12500 Chloride 33900 44650 F1 90 - 110 mg/Kg

Lab Sample ID: 890-1751-A-1-G MSD

**Matrix: Solid** 

**Analysis Batch: 15818** 

Sample Sample Spike MSD MSD %Rec. RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit 33900 F1 12500 Chloride 45280 mg/Kg 91 90 - 110

Lab Sample ID: 890-1754-A-5-C MS

**Matrix: Solid** 

**Analysis Batch: 15818** 

Sample Sample Spike MS MS %Rec. Result Qualifier Added Analyte Result Qualifier Unit D %Rec Limits Chloride 1240 2480 3826 mg/Kg 105 90 - 110

Lab Sample ID: 890-1754-A-5-D MSD

**Matrix: Solid** 

**Analysis Batch: 15818** 

MSD MSD %Rec. RPD Sample Sample Spike Result Qualifier Added Analyte Result Qualifier Limits RPD Limit Unit %Rec Chloride 1240 2480 3895 mg/Kg 107 90 - 110 20

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# **QC Association Summary**

 Client: WSP USA Inc.
 Job ID: 890-1752-1

 Project/Site: PLU 423
 SDG: 31403236.029

#### **GC VOA**

#### Prep Batch: 15695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1752-1	SS01	Total/NA	Solid	5035	
890-1752-2	SS02	Total/NA	Solid	5035	
MB 880-15695/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-15695/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-15695/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-9746-A-4-F MS	Matrix Spike	Total/NA	Solid	5035	
880-9746-A-4-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### **Analysis Batch: 15845**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1752-1	SS01	Total/NA	Solid	8021B	15695
890-1752-2	SS02	Total/NA	Solid	8021B	15695
MB 880-15695/5-A	Method Blank	Total/NA	Solid	8021B	15695
LCS 880-15695/1-A	Lab Control Sample	Total/NA	Solid	8021B	15695
LCSD 880-15695/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	15695
880-9746-A-4-F MS	Matrix Spike	Total/NA	Solid	8021B	15695
880-9746-A-4-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	15695

#### **Analysis Batch: 15908**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1752-1	SS01	Total/NA	Solid	Total BTEX	
890-1752-2	SS02	Total/NA	Solid	Total BTEX	

#### **GC Semi VOA**

#### Prep Batch: 15659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1752-1	SS01	Total/NA	Solid	8015NM Prep	
890-1752-2	SS02	Total/NA	Solid	8015NM Prep	
MB 880-15659/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-15659/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-15659/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1751-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1751-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### **Analysis Batch: 15677**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1752-1	SS01	Total/NA	Solid	8015B NM	15659
890-1752-2	SS02	Total/NA	Solid	8015B NM	15659
MB 880-15659/1-A	Method Blank	Total/NA	Solid	8015B NM	15659
LCS 880-15659/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	15659
LCSD 880-15659/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	15659
890-1751-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	15659
890-1751-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	15659

#### Analysis Batch: 15912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1752-1	SS01	Total/NA	Solid	8015 NM	
890-1752-2	SS02	Total/NA	Solid	8015 NM	

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# **QC Association Summary**

 Client: WSP USA Inc.
 Job ID: 890-1752-1

 Project/Site: PLU 423
 SDG: 31403236.029

#### HPLC/IC

#### Leach Batch: 15694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1752-1	SS01	Soluble	Solid	DI Leach	
890-1752-2	SS02	Soluble	Solid	DI Leach	
MB 880-15694/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-15694/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-15694/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1751-A-1-F MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1751-A-1-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-1754-A-5-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1754-A-5-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 15818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1752-1	SS01	Soluble	Solid	300.0	15694
890-1752-2	SS02	Soluble	Solid	300.0	15694
MB 880-15694/1-A	Method Blank	Soluble	Solid	300.0	15694
LCS 880-15694/2-A	Lab Control Sample	Soluble	Solid	300.0	15694
LCSD 880-15694/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	15694
890-1751-A-1-F MS	Matrix Spike	Soluble	Solid	300.0	15694
890-1751-A-1-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	15694
890-1754-A-5-C MS	Matrix Spike	Soluble	Solid	300.0	15694
890-1754-A-5-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	15694

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#### **Lab Chronicle**

Client: WSP USA Inc. Job ID: 890-1752-1 Project/Site: PLU 423 SDG: 31403236.029

**Client Sample ID: SS01** Lab Sample ID: 890-1752-1 Date Collected: 12/22/21 13:33

Matrix: Solid

Date Received: 12/23/21 09:57

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			15695	01/03/22 08:26	MR	XEN MID
Total/NA	Analysis	8021B		1	15845	01/03/22 19:18	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	15908	01/03/22 13:25	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	15912	01/03/22 13:55	AJ	XEN MID
Total/NA	Prep	8015NM Prep			15659	12/28/21 13:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	15677	12/29/21 14:42	AJ	XEN MID
Soluble	Leach	DI Leach			15694	12/29/21 08:26	CH	XEN MID
Soluble	Analysis	300.0		10	15818	12/31/21 01:04	CH	XEN MID

**Client Sample ID: SS02** Lab Sample ID: 890-1752-2

Date Collected: 12/22/21 13:37 Matrix: Solid

Date Received: 12/23/21 09:57

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			15695	01/03/22 08:26	MR	XEN MID
Total/NA	Analysis	8021B		1	15845	01/03/22 19:39	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	15908	01/03/22 13:25	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	15912	01/03/22 13:55	AJ	XEN MID
Total/NA	Prep	8015NM Prep			15659	12/28/21 13:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	15677	12/29/21 15:03	AJ	XEN MID
Soluble	Leach	DI Leach			15694	12/29/21 08:26	CH	XEN MID
Soluble	Analysis	300.0		50	15818	12/31/21 01:15	CH	XEN MID

#### **Laboratory References:**

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

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# **Accreditation/Certification Summary**

 Client: WSP USA Inc.
 Job ID: 890-1752-1

 Project/Site: PLU 423
 SDG: 31403236.029

### **Laboratory: Eurofins Xenco, Midland**

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

Authority	Pr	ogram	Identification Number	Expiration Date	
Authority Texas  The following analytes are included the agency does not offer certical Analysis Method  8015 NM	Ni	ELAP	T104704400-21-22	06-30-22	
The following analytes	are included in this report hi	it the laboratory is not certifi	ied by the governing authority. This list ma	v include analytes for	
• ,	• •	at the laboratory is not certifi	led by the governing authority. This list me	ay include analytes for t	
the agency does not of	• •	Matrix	Analyte	ay include analytes for t	
the agency does not off Analysis Method	fer certification.	•	, , ,	ay include analytes for v	

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## **Method Summary**

 Client: WSP USA Inc.
 Job ID: 890-1752-1

 Project/Site: PLU 423
 SDG: 31403236.029

Method **Method Description** Protocol Laboratory 8021B Volatile Organic Compounds (GC) SW846 XEN MID **Total BTEX Calculation** Total BTEX 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 SW846 XEN MID Closed System Purge and Trap 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

Eurofins Xenco, Carlsbad

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# **Sample Summary**

Client: WSP USA Inc. Project/Site: PLU 423 Job ID: 890-1752-1

SDG: 31403236.029

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1752-1	SS01	Solid	12/22/21 13:33	12/23/21 09:57	0.5
890-1752-2	SS02	Solid	12/22/21 13:37	12/23/21 09:57	0.5

						C C	ain	of C	Chain of Custody	ďγ				Wo	rk Ord	Work Order No:				
LABO	BORATORIES OF THE STATE OF THE	UI C		Houston,	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	1200 Dalla 5440) EL	as, TX (21	4) 902-03 <sub>1</sub> (915)585-	00 San An 3443 Lubt	tonio,TX (2:	10) 509-333 3)79 <b>4-</b> 1296	4								-
			Hobbs	NM (575-392-	Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	, AZ (480-	355-0900	) Atlanta.	GA (770-4	49-8800) T	ampa,FL (8	13-620-200	0)	WW	www.xenco.com	.com	Page	-	읔	-
Project Manager B	Ben Belill				(if different)	ent) A	Adrian Baker	ker							Work O	Work Order Comments	mment	S		
Company Name: V	WSP				Company Name		XTO Energy	ду				Prog	Program: UST/PST □PRP □Brownfields	r/PST □	PRP -	Brownfie	lds TRC		Superfund	
	3300 North A Street	eet			Address	ω	3104 E Green Street	een Stre	ě			St	State of Project:	oject:		1		]	ı	)
City, State ZIP:	Midland, TX 79705	55			City. State ZIP		Carlsbad, NM 88220	NM 882	20			Repo	Reporting:Level III	빌		TSU/TS41	ST YRRP	Ş.	Level IV	
	989-854-0852			Email:	Gilbert.Moreno@wsp.com, Adrian.Baker@exxonmobil.com	no@ws	p.com, /	Adrian.E	aker@e	xxonmob	l.com	Delive	Deliverables: EDD	EDD		ADaPT L		Other:		
Project Name: P	PLU 423 CM			Tur	Turn Around					ANALY	ANALYSIS REQUEST	UEST					W	rk Ord	Work Order Notes	Sa
Project Number: 3		31403236.	236.029	Routine	<u></u>						_						60 108	122106	200	
P.O. Number:				Rush:								_		_	_	3	EE.			
Sampler's Name: G	Gilbert Moreno			Due Date	ate											-	API			
SAMPLE RECEIPT		Temp Blank:	Yés No	Wet Ice: Yes	Yes) No															
Temperature (°C):	3/4.6	رو		nermometer ID	(	ners		)												
Received Intact:	(Yes)	No No	/	SMO	Q J	ntai		_		890-1752		Chain of Custody				_				
Cooler Custody Seals:	Yes No	N/A	Correc	Correction Factor:	らん	f Co				-		-	_	_			TAT start	ts the day	TAT starts the day recevied by the	d by the
Sample Custody Seals:	Yes No		Total	Total Containers:		er o	-										lab, i	receive	lab, if received by 4:30pm	mď
Sample Identification		Matrix	Date Sampled	Time Sampled	Depth	Numb	TPH (E	Chlorid									San	nple C	Sample Comments	ıts
SS01		S	12.22.21	13:33	0.5	-	×	×												
SS02		S	12.22.22	13:37	0.5		×	×		+		+		+						
														-		1				
						P	4	d	7	12	1									
					July 1	16	1	$\dagger$		-					-					
			$\setminus$			_	+					+		+	1					
Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	0 200.8 / 6020: and Metal(s) to be	20: be anal	ω	8RCRA 13PPM Te TCLP / SPLP 6010:		<sup>∞</sup> ≥	Sb As Sb As E	Ba Be Ba Be (	B Cd Ca Cd Cr Co	a Cr Co C o Cu Pb N	ᇚᆼᆘ	ù Fe Pb Mg Mn Mn Mo Ni Se Ag	⊒ <u>≷</u>	Ni K Se	ě.	SiO2 Na <b>1631</b>	Sr TI	TI Sn U V 45.1/7470 /	Na Sr TI Sn U V Zn 1631/245.1/7470/7471: Hg	. 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.	gnature of this document and relinquishment of samples constitutes a valid purchase or . Xenco will be liable only for the cost of samples and shall not assume any responsibili A minimum charge of \$75.00 will be applied to each project and a charge of \$7 for each	hment of s of samples oplied to ea	amples consti	utes a valid pur assume any res I a charge of \$5	rchase order fro sponsibility for a for each sample	m client co any losses e submitte	ompany to or expens d to Xenco	Xenco, its es incurre , but not a	affiliates au d by the clic nalyzed. Th	nd subcontra	ctors. It ass sses are due Il be enforce	ors. It assigns standard terms and conditions are due to circumstances beyond the conference of the previous of the conference of the conf	ard terms a stances bey reviously no	ind conditi ond the co egotiated.	ons					
Relinquished by: (Signature)	Signature)		Received k	Received by: (Signature)	(e)		Date/Time	ō	Reli	Relinquished by	by: (Signature)	ature)	_	Received by:	d by: (S	(Signature)			Date/Time	ne l
· Como	d d	7	A CA	$\mathcal{D}$		125	JS350	9	23											
or a									4 0											
																				200

# **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-1752-1 SDG Number: 31403236.029

Login Number: 1752 List Source: Eurofins Xenco, Carlsbad

List Number: 1 Creator: Clifton, Cloe

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	

Released to Imaging: 2/16/2022 12:59:48 PM

# **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-1752-1 SDG Number: 31403236.029

Login Number: 1752 List Source: Eurofins Xenco, Midland List Creation: 12/28/21 10:39 AM

List Number: 2 Creator: Rodriguez, Leticia

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

<6mm (1/4").



# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-1857-1

Laboratory Sample Delivery Group: 31403236.029 TASK06.02

Client Project/Site: PLU #423

For:

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

Attn: Benjamin Belill

JURAMER

Authorized for release by: 1/28/2022 1:27:54 PM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

.....LINKS

Review your project results through

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

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

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Client: WSP USA Inc. Project/Site: PLU #423 Laboratory Job ID: 890-1857-1 SDG: 31403236.029 TASK06.02

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#### **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-1857-1 Project/Site: PLU #423 SDG: 31403236.029 TASK06.02

#### **Qualifiers**

#### **GC VOA**

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

#### **GC Semi VOA**

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

HPLC/IC

Qualifier

Qualifier **Qualifier Description** 

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

DFR 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

Decision Level Concentration (Radiochemistry) DLC

**EDL** Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

EPA recommended "Maximum Contaminant Level" MCL MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

Method Detection Limit MDL 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

Toxicity Equivalent Factor (Dioxin) TEF Toxicity Equivalent Quotient (Dioxin) TEQ

**TNTC** Too Numerous To Count

#### **Case Narrative**

 Client: WSP USA Inc.
 Job ID: 890-1857-1

 Project/Site: PLU #423
 SDG: 31403236.029 TASK06.02

Job ID: 890-1857-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-1857-1

#### Receipt

The samples were received on 1/21/2022 3:25 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C

#### **GC VOA**

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

#### GC Semi VOA

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-17733 and analytical batch 880-17662 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### HPLC/IC

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

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Matrix: Solid

Lab Sample ID: 890-1857-1

# **Client Sample Results**

 Client: WSP USA Inc.
 Job ID: 890-1857-1

 Project/Site: PLU #423
 SDG: 31403236.029 TASK06.02

Client Sample ID: SS03

Date Collected: 01/18/22 14:05 Date Received: 01/21/22 15:25

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/25/22 07:21	01/25/22 17:49	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/25/22 07:21	01/25/22 17:49	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/25/22 07:21	01/25/22 17:49	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/25/22 07:21	01/25/22 17:49	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/25/22 07:21	01/25/22 17:49	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/25/22 07:21	01/25/22 17:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130			01/25/22 07:21	01/25/22 17:49	1
1,4-Difluorobenzene (Surr)	109		70 - 130			01/25/22 07:21	01/25/22 17:49	1
Method: Total BTEX - Total BTE	( Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX - -	<0.00398		0.00398	mg/Kg			01/28/22 14:15	
- Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/27/22 16:10	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	49.9	mg/Kg		01/25/22 15:06	01/25/22 22:32	1
Diesel Range Organics (Over C10-C28)	<49.9	U F1	49.9	mg/Kg		01/25/22 15:06	01/25/22 22:32	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/25/22 15:06	01/25/22 22:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130			01/25/22 15:06	01/25/22 22:32	1
o-Terphenyl	114		70 - 130			01/25/22 15:06	01/25/22 22:32	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
	• • •							
Analyte		Qualifier	RL 4.98	Unit	D	Prepared	Analyzed	Dil Fac

**Client Sample ID: SS04** 

Date Collected: 01/18/22 14:10 Date Received: 01/21/22 15:25

Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac Benzene <0.00200 U 0.00200 mg/Kg 01/25/22 07:21 01/25/22 18:09 Toluene <0.00200 U 0.00200 mg/Kg 01/25/22 07:21 01/25/22 18:09 Ethylbenzene <0.00200 U 0.00200 mg/Kg 01/25/22 07:21 01/25/22 18:09 0.00401 01/25/22 07:21 01/25/22 18:09 m-Xylene & p-Xylene <0.00401 U mg/Kg o-Xylene <0.00200 U 0.00200 01/25/22 07:21 01/25/22 18:09 mg/Kg Xylenes, Total <0.00401 U 0.00401 01/25/22 07:21 01/25/22 18:09 mg/Kg %Recovery Qualifier Limits Prepared Surrogate Analyzed Dil Fac

**Eurofins Carlsbad** 

01/25/22 18:09

Lab Sample ID: 890-1857-2

01/25/22 07:21

Matrix: Solid

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Released to Imaging: 2/16/2022 12:59:48 PM

4-Bromofluorobenzene (Surr)

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/20/2022

Matrix: Solid

Lab Sample ID: 890-1857-2

 Client: WSP USA Inc.
 Job ID: 890-1857-1

 Project/Site: PLU #423
 SDG: 31403236.029 TASK06.02

Client Sample ID: SS04

Date Collected: 01/18/22 14:10 Date Received: 01/21/22 15:25

Sample Depth: 0.5

Method: 8021B - \	Jolatile Organic	Compounds	(GC) (Continued)	

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	115		70 - 130	01/25/22 07:21	01/25/22 18:09	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			01/28/22 14:15	1

ı		
ı	Method: 8015 NM - Diesel Range Organics (DRO)	(CC)
ı	Method. 0013 NM - Diesel Kange Organics (DRO)	(00)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/27/22 16:10	1

Method: 8015B NM - Diese	I Range Organics (D	RO) (GC)
--------------------------	---------------------	----------

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		01/25/22 15:06	01/25/22 23:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/25/22 15:06	01/25/22 23:38	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/25/22 15:06	01/25/22 23:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits	Prep	oared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130	01/25/2	22 15:06	01/25/22 23:38	1
o-Terphenyl	93		70 - 130	01/25/2	22 15:06	01/25/22 23:38	1
<u>_</u>							

Method: 300.0 - Anions, Ion	Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.4	4.99	mg/Kg			01/27/22 19:59	1

Client Sample ID: SS05

Date Collected: 01/18/22 14:15

Lab Sample ID: 890-1857-3

Matrix: Solid

Date Collected: 01/18/22 14:15 Date Received: 01/21/22 15:25

Sample Depth: 0.5

Mathadi 0004D	Valatile Overen	ic Compounds (GC)
Memoo: Auzib	- voianie Urdan	ic Compounds (GC)

Wethou. 602 fb - Volatile Orga	nic Compounds (	GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/25/22 07:21	01/25/22 18:29	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/25/22 07:21	01/25/22 18:29	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/25/22 07:21	01/25/22 18:29	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/25/22 07:21	01/25/22 18:29	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/25/22 07:21	01/25/22 18:29	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/25/22 07:21	01/25/22 18:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	130		70 - 130			01/25/22 07:21	01/25/22 18:29	1
1,4-Difluorobenzene (Surr)	109		70 - 130			01/25/22 07:21	01/25/22 18:29	1

Method:	Total RTF)	( - Total RTFX	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	ma/Ka			01/28/22 14:15	1

	Method: 8015 NM - Diesel	Range Organics (DRO	D) (GC)	١
ı	Michiga. 00 to Min - Diese	i italige Organics (Ditt		,

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 U	50.0	mg/Kg			01/27/22 16:10	1

Eurofins Carlsbad

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Lab Sample ID: 890-1857-3

Job ID: 890-1857-1

Client: WSP USA Inc. Project/Site: PLU #423 SDG: 31403236.029 TASK06.02

**Client Sample ID: SS05** Date Collected: 01/18/22 14:15 Date Received: 01/21/22 15:25

Matrix: Solid

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/25/22 15:06	01/26/22 00:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/25/22 15:06	01/26/22 00:00	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/25/22 15:06	01/26/22 00:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130			01/25/22 15:06	01/26/22 00:00	1
o-Terphenyl	131	S1+	70 - 130			01/25/22 15:06	01/26/22 00:00	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

**Client Sample ID: SS06** Lab Sample ID: 890-1857-4 Date Collected: 01/18/22 14:20 Matrix: Solid

Date Received: 01/21/22 15:25

Sample Depth: 0.5

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		01/25/22 07:21	01/25/22 18:50	1
Toluene	<0.00202	U	0.00202	mg/Kg		01/25/22 07:21	01/25/22 18:50	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/25/22 07:21	01/25/22 18:50	1
m-Xylene & p-Xylene	< 0.00403	U	0.00403	mg/Kg		01/25/22 07:21	01/25/22 18:50	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/25/22 07:21	01/25/22 18:50	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		01/25/22 07:21	01/25/22 18:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	165	S1+	70 - 130			01/25/22 07:21	01/25/22 18:50	1
1,4-Difluorobenzene (Surr)	84		70 - 130			01/25/22 07:21	01/25/22 18:50	1
Method: Total BTEX - Total BTEX Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
						•		
Total BTEX	<0.00403	U	0.00403	mg/Kg			01/28/22 14:15	1
Method: 8015 NM - Diesel Range	Organics (DR		0.00403	mg/Kg Unit		Prepared	01/28/22 14:15  Analyzed	1 Dil Fac
Total BTEX  Method: 8015 NM - Diesel Range Analyte  Total TPH	Organics (DR	O) (GC) Qualifier			D	Prepared		Dil Fac
Method: 8015 NM - Diesel Range Analyte	Organics (DR Result <49.9	O) (GC) Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH Method: 8015B NM - Diesel Rang	Organics (DR Result <49.9	O) (GC) Qualifier	RL	Unit	<u>D</u>	Prepared Prepared	Analyzed	·
Method: 8015 NM - Diesel Range Analyte Total TPH	Organics (DR Result <49.9	Qualifier U RO) (GC) Qualifier	<b>RL</b> 49.9	<b>Unit</b> mg/Kg		<u> </u>	Analyzed 01/27/22 16:10	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	Organics (DR/Result <49.9  e Organics (D/Result Result )	Qualifier U  RO) (GC) Qualifier U	RL 49.9	Unit mg/Kg		Prepared	Analyzed 01/27/22 16:10 Analyzed	Dil Fac  Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Organics (DR/Result <a href="#">&lt;49.9</a> e Organics (D/Result <a href="#">&lt;49.9</a>	Qualifier U  RO) (GC) Qualifier U  U  U  U	RL 49.9 RL 49.9	Unit mg/Kg  Unit mg/Kg		Prepared 01/25/22 15:06	Analyzed 01/27/22 16:10  Analyzed 01/26/22 00:23	Dil Fac  Dil Fac  1
Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Organics (DR/Result <49.9  e Organics (D/Result <49.9) <p>&lt;49.9</p>	Qualifier U  RO) (GC) Qualifier U  U  U  U	RL 49.9  RL 49.9  49.9	Unit mg/Kg  Unit mg/Kg mg/Kg		Prepared 01/25/22 15:06 01/25/22 15:06	Analyzed 01/27/22 16:10  Analyzed 01/26/22 00:23 01/26/22 00:23	Dil Fac
Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Organics (DR/Result	Qualifier U  RO) (GC) Qualifier U  U  U  U	RL 49.9  RL 49.9  49.9	Unit mg/Kg  Unit mg/Kg mg/Kg		Prepared 01/25/22 15:06 01/25/22 15:06 01/25/22 15:06	Analyzed 01/27/22 16:10  Analyzed 01/26/22 00:23 01/26/22 00:23	Dil Fac  Dil Fac  1  1  1

Matrix: Solid

Matrix: Solid

Lab Sample ID: 890-1857-4

Job ID: 890-1857-1

Client: WSP USA Inc. Project/Site: PLU #423 SDG: 31403236.029 TASK06.02

**Client Sample ID: SS06** 

Date Collected: 01/18/22 14:20 Date Received: 01/21/22 15:25

Sample Depth: 0.5

Method: 300.0 - Anions, Ion Chromatography - Soluble								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.7		5.02	mg/Kg			01/27/22 20:29	1

**Client Sample ID: SS07** Lab Sample ID: 890-1857-5

Date Collected: 01/18/22 14:30 Date Received: 01/21/22 15:25

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/25/22 07:21	01/25/22 19:10	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/25/22 07:21	01/25/22 19:10	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/25/22 07:21	01/25/22 19:10	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		01/25/22 07:21	01/25/22 19:10	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/25/22 07:21	01/25/22 19:10	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/25/22 07:21	01/25/22 19:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130			01/25/22 07:21	01/25/22 19:10	1
1,4-Difluorobenzene (Surr)	108		70 - 130			01/25/22 07:21	01/25/22 19:10	1
· Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			01/28/22 14:15	1
Method: 8015 NM - Diesel Range	Organics (DP)	O) (GC)						
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/27/22 16:10	1
Method: 8015B NM - Diesel Rang	ge Organics (Di	RO) (GC)						
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/25/22 15:06	01/26/22 00:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/25/22 15:06	01/26/22 00:46	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/25/22 15:06	01/26/22 00:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	77		70 - 130			01/25/22 15:06	01/26/22 00:46	1
o-Terphenyl	87		70 - 130			01/25/22 15:06	01/26/22 00:46	1
Method: 300.0 - Anions, Ion Chr	omatography -	Soluble						
Method: 300.0 - Anions, Ion Chro		Soluble Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

# **Surrogate Summary**

Client: WSP USA Inc. Job ID: 890-1857-1 Project/Site: PLU #423 SDG: 31403236.029 TASK06.02

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance
		BFB1	DFBZ1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
80-10483-A-21-H MS	Matrix Spike	124	97	
30-10483-A-21-I MSD	Matrix Spike Duplicate	120	99	
90-1857-1	SS03	133 S1+	109	
90-1857-2	SS04	123	115	
90-1857-3	SS05	130	109	
90-1857-4	SS06	165 S1+	84	
90-1857-5	SS07	78	108	
CS 880-17653/1-A	Lab Control Sample	121	105	
CSD 880-17653/2-A	Lab Control Sample Dup	128	107	
1B 880-17653/5-A	Method Blank	117	95	

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 (Acc
		1001	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-1857-1	SS03	101	114	
890-1857-1 MS	SS03	90	86	
890-1857-1 MSD	SS03	91	87	
890-1857-2	SS04	82	93	
890-1857-3	SS05	115	131 S1+	
890-1857-4	SS06	84	93	
890-1857-5	SS07	77	87	
LCS 880-17733/2-A	Lab Control Sample	106	114	
LCSD 880-17733/3-A	Lab Control Sample Dup	121	127	
MB 880-17733/1-A	Method Blank	90	101	

**Surrogate Legend** 

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Client: WSP USA Inc. Job ID: 890-1857-1 Project/Site: PLU #423 SDG: 31403236.029 TASK06.02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-17653/5-A

Lab Sample ID: LCS 880-17653/1-A

Matrix: Solid

Analysis Batch: 17654

**Matrix: Solid** 

Analysis Batch: 17654

Prep Type: Total/NA

Prep Batch: 17653

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/25/22 07:21	01/25/22 10:44	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/25/22 07:21	01/25/22 10:44	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/25/22 07:21	01/25/22 10:44	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/25/22 07:21	01/25/22 10:44	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/25/22 07:21	01/25/22 10:44	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/25/22 07:21	01/25/22 10:44	1

мв мв

MD MD

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130		01/25/22 07:21	01/25/22 10:44	1
1,4-Difluorobenzene (Surr)	95		70 - 130	C	01/25/22 07:21	01/25/22 10:44	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 17653

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09202		mg/Kg		92	70 - 130	
Toluene	0.100	0.09924		mg/Kg		99	70 - 130	
Ethylbenzene	0.100	0.09918		mg/Kg		99	70 - 130	
m-Xylene & p-Xylene	0.200	0.1975		mg/Kg		99	70 - 130	
o-Xylene	0.100	0.09716		mg/Kg		97	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	121	70 - 130
1,4-Difluorobenzene (Surr)	105	70 - 130

**Client Sample ID: Lab Control Sample Dup** 

Matrix: Solid

Analysis Batch: 17654

Lab Sample ID: LCSD 880-17653/2-A

Prep Type: Total/NA Prep Batch: 17653

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09636		mg/Kg		96	70 - 130	5	35
Toluene	0.100	0.1042		mg/Kg		104	70 - 130	5	35
Ethylbenzene	0.100	0.1036		mg/Kg		104	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2050		mg/Kg		103	70 - 130	4	35
o-Xylene	0.100	0.1040		mg/Kg		104	70 - 130	7	35

LCSD LCSD

Surrogate	%Recovery Qualif	ier Limits
4-Bromofluorobenzene (Surr)	128	70 - 130
1,4-Difluorobenzene (Surr)	107	70 - 130

Lab Sample ID: 880-10483-A-21-H MS

**Matrix: Solid** 

Analysis Batch: 17654

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

Prep Batch: 17653

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00199	U	0.100	0.08943		mg/Kg		89	70 - 130	
Toluene	<0.00199	U	0.100	0.09753		mg/Kg		96	70 - 130	

# **QC Sample Results**

Client: WSP USA Inc. Job ID: 890-1857-1 Project/Site: PLU #423 SDG: 31403236.029 TASK06.02

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

Lab Sample ID: 880-10483-A-21-H MS Client Sample ID: Matrix Spike Prep Type: Total/NA

**Matrix: Solid** Analysis Batch: 17654

Sample Sample Spike MS MS %Rec. Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Ethylbenzene < 0.00199 U 0.100 0.09903 99 70 - 130 mg/Kg m-Xylene & p-Xylene <0.00398 0.201 0.2022 mg/Kg 101 70 - 130 o-Xylene <0.00199 U 0.100 0.09981 70 - 130 mg/Kg 99

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	124		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 880-10483-A-21-I MSD Client Sample ID: Matrix Spike Duplicate

**Matrix: Solid** 

Analysis Batch: 17654

Prep Type: Total/NA

Prep Batch: 17653

Prep Batch: 17653

Sample Sample Spike MSD MSD %Rec. RPD Result Qualifier Added Result Qualifier RPD Limit Analyte Unit %Rec Limits Benzene <0.00199 U 0.100 0.09000 mg/Kg 90 70 - 130 35 Toluene <0.00199 0.100 0.09198 mg/Kg 91 70 - 130 6 35 Ethylbenzene <0.00199 U 0.100 0.09451 94 70 - 130 5 35 mg/Kg 0.200 0.1866 70 - 130 35 m-Xylene & p-Xylene <0.00398 U mg/Kg 93 8 <0.00199 U 0.100 0.09185 91 70 - 130 o-Xylene mg/Kg 8

MSD MSD

Surrogate	%Recovery Q	ualifier	Limits
4-Bromofluorobenzene (Surr)	120		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

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

Lab Sample ID: MB 880-17733/1-A

**Matrix: Solid** 

Analysis Batch: 17662

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 17733

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/25/22 15:06	01/25/22 21:23	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/25/22 15:06	01/25/22 21:23	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/25/22 15:06	01/25/22 21:23	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130	01/25/22 15:06	01/25/22 21:23	1
o-Terphenyl	101		70 - 130	01/25/22 15:06	01/25/22 21:23	1

Lab Sample ID: LCS 880-17733/2-A

**Matrix: Solid** 

**Analysis Batch: 17662** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Prep Batch: 17733

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	948.6	-	mg/Kg		95	70 - 130	 
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1021		mg/Kg		102	70 - 130	
C10-C28)								

Client: WSP USA Inc. Job ID: 890-1857-1 SDG: 31403236.029 TASK06.02 Project/Site: PLU #423

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

Lab Sample ID: LCS 880-17733/2-A **Client Sample ID: Lab Control Sample** 

**Matrix: Solid** 

Prep Type: Total/NA Analysis Batch: 17662 Prep Batch: 17733

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	114		70 - 130

LCS LCS

Lab Sample ID: LCSD 880-17733/3-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid Prep Type: Total/NA Prep Batch: 17733 Analysis Batch: 17662

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	996.4		mg/Kg		100	70 - 130	5	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1102		mg/Kg		110	70 - 130	8	20
C10-C28)									

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	127		70 - 130

Lab Sample ID: 890-1857-1 MS **Client Sample ID: SS03 Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 17662 Prep Batch: 17733

	Sample	Sample	<b>Spike</b>	IVIS	IVIS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<49.9	U F1	997	1370	F1	mg/Kg		137	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	<49.9	U F1	997	1360	F1	mg/Kg		134	70 - 130	
C10-C28)										

MS MS %Recovery Qualifier Limits Surrogate 70 - 130 1-Chlorooctane 90 70 - 130 o-Terphenyl 86

Lab Sample ID: 890-1857-1 MSD **Client Sample ID: SS03 Matrix: Solid** 

Prep Type: Total/NA Analysis Batch: 17662 Prep Batch: 17733

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	996	1375	F1	mg/Kg		138	70 - 130	0	20	
Diesel Range Organics (Over C10-C28)	<49.9	U F1	996	1357	F1	mg/Kg		134	70 - 130	0	20	

,			
	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	87		70 - 130

# **QC Sample Results**

 Client: WSP USA Inc.
 Job ID: 890-1857-1

 Project/Site: PLU #423
 SDG: 31403236.029 TASK06.02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-17707/1-A

Matrix: Solid

**Analysis Batch: 17737** 

Client Sample ID: Method Blank
Prep Type: Soluble

 MB
 MB

 Analyte
 Result
 Qualifier
 RL
 Unit
 D
 Prepared
 Analyzed
 Dil Fac

 Chloride
 <5.00</td>
 U
 5.00
 mg/Kg
 01/27/22 17:51
 1

Lab Sample ID: LCS 880-17707/2-A

Client Sample ID: Lab Control Sample

Matrix: Solid

Prep Type: Soluble

Analysis Batch: 17737

Alialysis Batcii. 17737

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

Lab Sample ID: LCSD 880-17707/3-A

Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Prep Type: Soluble

**Analysis Batch: 17737** 

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

Lab Sample ID: 890-1857-2 MS

Matrix: Solid

Client Sample ID: SS04

Prep Type: Soluble

Matrix. Soliu

**Analysis Batch: 17737** 

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

Lab Sample ID: 890-1857-2 MSD

Matrix: Solid

**Analysis Batch: 17737** 

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

**Eurofins Carlsbad** 

**Client Sample ID: SS04** 

**Prep Type: Soluble** 

# **QC Association Summary**

Client: WSP USA Inc. Job ID: 890-1857-1 Project/Site: PLU #423 SDG: 31403236.029 TASK06.02

#### **GC VOA**

## Prep Batch: 17653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1857-1	SS03	Total/NA	Solid	5035	
890-1857-2	SS04	Total/NA	Solid	5035	
890-1857-3	SS05	Total/NA	Solid	5035	
890-1857-4	SS06	Total/NA	Solid	5035	
890-1857-5	SS07	Total/NA	Solid	5035	
MB 880-17653/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-17653/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-17653/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-10483-A-21-H MS	Matrix Spike	Total/NA	Solid	5035	
880-10483-A-21-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 17654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1857-1	SS03	Total/NA	Solid	8021B	17653
890-1857-2	SS04	Total/NA	Solid	8021B	17653
890-1857-3	SS05	Total/NA	Solid	8021B	17653
890-1857-4	SS06	Total/NA	Solid	8021B	17653
890-1857-5	SS07	Total/NA	Solid	8021B	17653
MB 880-17653/5-A	Method Blank	Total/NA	Solid	8021B	17653
LCS 880-17653/1-A	Lab Control Sample	Total/NA	Solid	8021B	17653
LCSD 880-17653/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	17653
880-10483-A-21-H MS	Matrix Spike	Total/NA	Solid	8021B	17653
880-10483-A-21-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	17653

#### **Analysis Batch: 18058**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1857-1	SS03	Total/NA	Solid	Total BTEX	
890-1857-2	SS04	Total/NA	Solid	Total BTEX	
890-1857-3	SS05	Total/NA	Solid	Total BTEX	
890-1857-4	SS06	Total/NA	Solid	Total BTEX	
890-1857-5	SS07	Total/NA	Solid	Total BTEX	

#### **GC Semi VOA**

#### Analysis Batch: 17662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1857-1	SS03	Total/NA	Solid	8015B NM	17733
890-1857-2	SS04	Total/NA	Solid	8015B NM	17733
890-1857-3	SS05	Total/NA	Solid	8015B NM	17733
890-1857-4	SS06	Total/NA	Solid	8015B NM	17733
890-1857-5	SS07	Total/NA	Solid	8015B NM	17733
MB 880-17733/1-A	Method Blank	Total/NA	Solid	8015B NM	17733
LCS 880-17733/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	17733
LCSD 880-17733/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	17733
890-1857-1 MS	SS03	Total/NA	Solid	8015B NM	17733
890-1857-1 MSD	SS03	Total/NA	Solid	8015B NM	17733

#### Prep Batch: 17733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1857-1	SS03	Total/NA	Solid	8015NM Prep	
890-1857-2	SS04	Total/NA	Solid	8015NM Prep	

# **QC Association Summary**

Job ID: 890-1857-1 Client: WSP USA Inc. Project/Site: PLU #423 SDG: 31403236.029 TASK06.02

# GC Semi VOA (Continued)

#### Prep Batch: 17733 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1857-3	SS05	Total/NA	Solid	8015NM Prep	
890-1857-4	SS06	Total/NA	Solid	8015NM Prep	
890-1857-5	SS07	Total/NA	Solid	8015NM Prep	
MB 880-17733/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-17733/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-17733/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1857-1 MS	SS03	Total/NA	Solid	8015NM Prep	
890-1857-1 MSD	SS03	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 17951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1857-1	SS03	Total/NA	Solid	8015 NM	
890-1857-2	SS04	Total/NA	Solid	8015 NM	
890-1857-3	SS05	Total/NA	Solid	8015 NM	
890-1857-4	SS06	Total/NA	Solid	8015 NM	
890-1857-5	SS07	Total/NA	Solid	8015 NM	

#### **HPLC/IC**

#### Leach Batch: 17707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1857-1	SS03	Soluble	Solid	DI Leach	_
890-1857-2	SS04	Soluble	Solid	DI Leach	
890-1857-3	SS05	Soluble	Solid	DI Leach	
890-1857-4	SS06	Soluble	Solid	DI Leach	
890-1857-5	SS07	Soluble	Solid	DI Leach	
MB 880-17707/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-17707/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-17707/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1857-2 MS	SS04	Soluble	Solid	DI Leach	
890-1857-2 MSD	SS04	Soluble	Solid	DI Leach	

#### Analysis Batch: 17737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1857-1	SS03	Soluble	Solid	300.0	17707
890-1857-2	SS04	Soluble	Solid	300.0	17707
890-1857-3	SS05	Soluble	Solid	300.0	17707
890-1857-4	SS06	Soluble	Solid	300.0	17707
890-1857-5	SS07	Soluble	Solid	300.0	17707
MB 880-17707/1-A	Method Blank	Soluble	Solid	300.0	17707
LCS 880-17707/2-A	Lab Control Sample	Soluble	Solid	300.0	17707
LCSD 880-17707/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	17707
890-1857-2 MS	SS04	Soluble	Solid	300.0	17707
890-1857-2 MSD	SS04	Soluble	Solid	300.0	17707

#### Lab Chronicle

Client: WSP USA Inc. Job ID: 890-1857-1 Project/Site: PLU #423 SDG: 31403236.029 TASK06.02

**Client Sample ID: SS03** Lab Sample ID: 890-1857-1

Date Collected: 01/18/22 14:05 **Matrix: Solid** Date Received: 01/21/22 15:25

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17653	01/25/22 07:21	KL	XEN MID
Total/NA	Analysis	8021B		1	17654	01/25/22 17:49	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	18058	01/28/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17951	01/27/22 16:10	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17733	01/25/22 15:06	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17662	01/25/22 22:32	AJ	XEN MID
Soluble	Leach	DI Leach			17707	01/25/22 12:33	CH	XEN MID
Soluble	Analysis	300.0		1	17737	01/27/22 19:52	CH	XEN MID

Client Sample ID: SS04 Lab Sample ID: 890-1857-2

Date Collected: 01/18/22 14:10 **Matrix: Solid** Date Received: 01/21/22 15:25

Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab 5035 XEN MID Total/NA Prep 17653 01/25/22 07:21 KL 8021B Total/NA 01/25/22 18:09 XEN MID Analysis 1 17654 MR Total/NA Total BTEX 18058 01/28/22 14:15 XEN MID Analysis 1 A.I Total/NA Analysis 8015 NM 17951 01/27/22 16:10 XEN MID Total/NA XEN MID Prep 8015NM Prep 17733 01/25/22 15:06 DM Total/NA Analysis 8015B NM 17662 01/25/22 23:38 AJ XEN MID XEN MID Soluble Leach DI Leach 17707 01/25/22 12:33 CH

1 Lab Sample ID: 890-1857-3 **Client Sample ID: SS05** 

17737

01/27/22 19:59

СН

XEN MID

Date Collected: 01/18/22 14:15 Date Received: 01/21/22 15:25

Analysis

300.0

Soluble

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17653	01/25/22 07:21	KL	XEN MID
Total/NA	Analysis	8021B		1	17654	01/25/22 18:29	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	18058	01/28/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17951	01/27/22 16:10	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17733	01/25/22 15:06	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17662	01/26/22 00:00	AJ	XEN MID
Soluble	Leach	DI Leach			17707	01/25/22 12:33	CH	XEN MID
Soluble	Analysis	300.0		1	17737	01/27/22 20:22	CH	XEN MID

**Client Sample ID: SS06** Lab Sample ID: 890-1857-4

Date Collected: 01/18/22 14:20 Matrix: Solid Date Received: 01/21/22 15:25

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17653	01/25/22 07:21	KL	XEN MID
Total/NA	Analysis	8021B		1	17654	01/25/22 18:50	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	18058	01/28/22 14:15	AJ	XEN MID

**Eurofins Carlsbad** 

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**Matrix: Solid** 

#### **Lab Chronicle**

Client: WSP USA Inc. Job ID: 890-1857-1 Project/Site: PLU #423 SDG: 31403236.029 TASK06.02

**Client Sample ID: SS06** 

Date Collected: 01/18/22 14:20 Date Received: 01/21/22 15:25 Lab Sample ID: 890-1857-4

Matrix: Solid

Matrix: Solid

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	17951	01/27/22 16:10	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17733	01/25/22 15:06	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17662	01/26/22 00:23	AJ	XEN MID
Soluble	Leach	DI Leach			17707	01/25/22 12:33	CH	XEN MID
Soluble	Analysis	300.0		1	17737	01/27/22 20:29	CH	XEN MID

**Client Sample ID: SS07** Lab Sample ID: 890-1857-5

Date Collected: 01/18/22 14:30

Date Received: 01/21/22 15:25

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17653	01/25/22 07:21	KL	XEN MID
Total/NA	Analysis	8021B		1	17654	01/25/22 19:10	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	18058	01/28/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17951	01/27/22 16:10	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17733	01/25/22 15:06	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17662	01/26/22 00:46	AJ	XEN MID
Soluble	Leach	DI Leach			17707	01/25/22 12:33	CH	XEN MID
Soluble	Analysis	300.0		1	17737	01/27/22 20:52	CH	XEN MID

Laboratory References:

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

# **Accreditation/Certification Summary**

 Client: WSP USA Inc.
 Job ID: 890-1857-1

 Project/Site: PLU #423
 SDG: 31403236.029 TASK06.02

#### **Laboratory: Eurofins Midland**

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

Authority	Pre	ogram	Identification Number	<b>Expiration Date</b>
Texas	NE	ELAP	T104704400-21-22	06-30-22
The following analytes	are included in this report, bu	t the laboratory is not certif	ied by the governing authority. This list ma	av include analytes for wh
the agency does not of	fer certification.	•	3 · · · · · · · · · · · · · · · · · · ·	.,
the agency does not of Analysis Method	fer certification. Prep Method	Matrix	Analyte	.,
0 ,		Matrix Solid		

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# **Method Summary**

 Client: WSP USA Inc.
 Job ID: 890-1857-1

 Project/Site: PLU #423
 SDG: 31403236.029 TASK06.02

Protocol Laboratory
SW846 XEN MID

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

#### **Protocol References:**

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

# **Sample Summary**

Client: WSP USA Inc.
Project/Site: PLU #423
SDG: 31403

Job ID: 890-1857-1 SDG: 31403236.029 TASK06.02

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1857-1	SS03	Solid	01/18/22 14:05	01/21/22 15:25	0.5
890-1857-2	SS04	Solid	01/18/22 14:10	01/21/22 15:25	0.5
890-1857-3	SS05	Solid	01/18/22 14:15	01/21/22 15:25	0.5
890-1857-4	SS06	Solid	01/18/22 14:20	01/21/22 15:25	0.5
890-1857-5	SS07	Solid	01/18/22 14:30	01/21/22 15:25	0.5

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on ω	1 000 Cli	Relinquished by: (Signature)	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.	Total 200.7 / 6010 Circle Method(s)				350/	SS06	SS05	SS04	SSO3	Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name:	P.O. Number:	Project Number:	Project Name:	Phone:	City, State ZIP:	Address:	Company Name:	Project Manager:	-		
	Ch	y: (Signature)	document and relinque liable only for the costarge of \$75.00 will be	otal 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed					56	55	34	)3	ntification	<u> "</u>	ls: Yes No	(A)	)G		Alexis Castro		31403236.029		432.236.3849	Midland, TX 79705	3300 North A Street	WSP USA Inc.	Benjamin Bellil	ABORATORIES	nzn	
			ishment of st of sample applied to s	<b>020:</b> to be ana				U		S	S	S	Matrix	NA	NA	No .	7	Temp Blank:			l I	PLU #423		05	reet			in	J	
	loe Civ	Received by:	samples constit is and shall not a each project and	8RCRA alyzed TCL				01/18/2022	01/18/2022	01/18/2022	01/18/2022	01/18/2022	Date Sampled	Total	Correc	71	-  -  -	(Yes) No			Task #: 06.02	3						Hobbs, N		
	1	yː (Signature)	utes a valid p assume any i a charge of	RA 13PPM				1430	1420	1415	1410	1405	Time Sampled	Total Containers:	Correction Factor:	DM J	Thermometer ID	Wet Ice:	Due	Rush:	Routine	_	Email:					Midland M (575-392	Houston	
		ure)	ourchase order f esponsibility fo \$5 for each sam	CRA 13PPM Texas		1		0.0	0.5	0.5	0.5	0.5'	Depth	9:	1.0.2	77	r ID	e: (Yes) No	Due Date:	h:	tine 💟	Turn Around		City, State ZIP:	Address:	Company Name:	Bill to: (if different)	Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800)	Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334	
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Revised Date 051418 Rev 2018		Date/Time		2 Na Sr Tl Sn U V Zn 1631 / 245.1 / 7470 / 7471 : Hg									Sample Comments	lab, if received by 4:30pm	TAT starts the day recevied by the				API: 30-015-40710	1221001	INC: nAPP2132248577	Work Order Notes		Reporting:Level III Level III PST/UST RRP Level IV		Superfund		of		
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1089 N Canal St. **Eurofins Carlsbad** 

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Chain of Custody Record

Environment Testing

Project Name: PLU #423 Midland State Zip: TX 79701 Carlsbad, NM 88220 Phone. 575-988-3199 Fax: 575-988-3199 SS05 (890-1857-3) SS04 (890-1857-2) SS03 (890-1857-1) Eurofins Environment Testing South Centr Shipping/Receiving SS06 (890-1857-4) Sample Identification - Client ID (Lab ID) 132-704-5440(Tel) 1211 W Florida Ave, SS07 (890-1857-5) Vote: Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the aboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC. lient Information Deliverable Requested I II III IV Other (specify) ossible Hazard Identification Custody Seals Intact
∆ Yes ∆ No linquished by: npty Kit Rel rconfirmed (Sub Contract Lab) Custody Seal No Project #: 89000004 ¥O FAT Requested (days) Due Date Requested hone Date/Time Primary Deliverable Rank. Sample Date 1/18/22 1/18/22 1/18/22 1/18/22 1/18/22 Mountain 14 30 Mountain 14 20 Mountain 14 15 Mountain 14 10 Date Mountain Sample 14 05 (C=comp, G=grab) Sample Preservation Code: Type Company Company Matrix Solid Solid Solid Solid Solid Kramer, Jessica essica.kramer@eurofinset com Field Filtered Sample (Yes or No) NELAP - Louisiana NELAP - Texas Ime Special Instructions/QC Requirements Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) Perform MS/MSD (Yes or No) 8015MOD\_NM/8015NM\_S\_Prep (MOD) Full TPH Received by Received by × × × × Cooler Temperature(s) °C and Other Remarks. Received by: × Return To Client 8015MOD Calc × × × × × × × × ×  $\times$ 00\_ORGFM\_28D/DI\_LEACH Chloride × × × × × 3021B/5035FP Calc (MOD) BTEX STANCE OF THE PARTY OF THE PART Analysis Requested Total\_BTEX\_GCV × × × × \$ Disposal By Lab New Mexico Carrier Tracking No(s): 0 Method of Shipment: Date/Time Date/Time で で ら Archive For Total Number of containers 98 A HCL
B NaOH
C Zn Acetate
D-Nitric Acid
F NaHSO4
F MeoloH
G Amchior
H Ascorbic Acid
I Ice
J DI Water
K EDTA
L EDA COC No 890-597 1 890-1857-1 Preservation Codes Page 1 of 1 Special Instructions/Note B 6 M Hexane
N None
O AsNaO2
P NaZO4S
Q NaZSO3
R NaZSCO3
S HZSO4
T - TSP Dodecahydrate
U Acetone
V MCAA
W pH 4-5
Z other (specify) Company Ver: 06/08/2021 Months 904

# **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-1857-1

SDG Number: 31403236.029 TASK06.02

SDG Number: 31403236.029 TASK06.02

Login Number: 1857 List Source: Eurofins Carlsbad

List Number: 1 Creator: Clifton, Cloe

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	

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1/28/2022

# **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-1857-1

SDG Number: 31403236.029 TASK06.02

**List Source: Eurofins Midland** 

List Creation: 01/25/22 11:57 AM

Creator: Rodriguez, Leticia

Login Number: 1857

List Number: 2

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

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<6mm (1/4").



# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-1856-1

Laboratory SDG: 31403236.029 TASK #06.02

Client Project/Site: PLU #423

For:

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

Attn: Benjamin Belill

JURAMER

Authorized for release by: 1/28/2022 1:27:27 PM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

LINKS

Review your project results through

**Have a Question?** 



Visit us at:

www.eurofinsus.com/Env
Released to Imaging: 2/16/2022 12:59:48 PM

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.

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Client: WSP USA Inc. Project/Site: PLU #423 Laboratory Job ID: 890-1856-1 SDG: 31403236.029 TASK #06.02

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### **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-1856-1
Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

Qualifiers

**GC VOA** 

Qualifier Description

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

**GC Semi VOA** 

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

**HPLC/IC** 

F1 MS and/or MSD recovery exceeds control limits.

U Indicates the analyte was analyzed for but not detected.

**Glossary** 

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery

CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present
POI Practical Quantitation Limit

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: 890-1856-1
Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

Job ID: 890-1856-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-1856-1

#### Receipt

The samples were received on 1/21/2022 3:25 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C

#### **GC VOA**

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS02 (890-1856-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### GC Semi VOA

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

#### HPLC/IC

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-17707 and analytical batch 880-17737 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

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Lab Sample ID: 890-1856-1

Client: WSP USA Inc. Job ID: 890-1856-1
Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

Client Sample ID: PH01

Date Collected: 01/18/22 10:00 Date Received: 01/21/22 15:25

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/25/22 16:00	01/25/22 19:48	
Toluene	<0.00200	U	0.00200	mg/Kg		01/25/22 16:00	01/25/22 19:48	•
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/25/22 16:00	01/25/22 19:48	•
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/25/22 16:00	01/25/22 19:48	
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/25/22 16:00	01/25/22 19:48	•
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/25/22 16:00	01/25/22 19:48	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	163	S1+	70 - 130			01/25/22 16:00	01/25/22 19:48	
1,4-Difluorobenzene (Surr)	95		70 - 130			01/25/22 16:00	01/25/22 19:48	•
Method: Total BTEX - Total BTEX	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg		-	01/28/22 14:15	
Analyte Total TPH	<49.9	Qualifier U	<b>RL</b> 49.9	mg/Kg	D	Prepared	Analyzed 01/27/22 16:10	Dil Fa
Total TPH - -	<49.9	U	49.9	mg/Kg			01/27/22 16:10	•
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte								
	Result	Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10			<b>RL</b> 49.9	Unit mg/Kg	<u>D</u>	Prepared 01/26/22 08:15	Analyzed 01/26/22 12:17	
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over		U			<u>D</u>			
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg	<u>D</u>	01/26/22 08:15	01/26/22 12:17	
(GRO)-C6-C10 Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg	<u>D</u>	01/26/22 08:15	01/26/22 12:17	
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<49.9 <49.9	U U	49.9	mg/Kg	<u>D</u>	01/26/22 08:15 01/26/22 08:15 01/26/22 08:15 Prepared	01/26/22 12:17	
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<49.9 <49.9 <49.9	U U	49.9 49.9 49.9	mg/Kg	<u>D</u>	01/26/22 08:15 01/26/22 08:15 01/26/22 08:15	01/26/22 12:17 01/26/22 12:17 01/26/22 12:17	Dil Fac
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	<49.9 <49.9 <49.9 %Recovery	U U	49.9 49.9 49.9 <i>Limits</i>	mg/Kg	<u> </u>	01/26/22 08:15 01/26/22 08:15 01/26/22 08:15 Prepared	01/26/22 12:17 01/26/22 12:17 01/26/22 12:17 Analyzed	Dil Fa
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	<49.9 <49.9 <49.9  **Recovery 72 82  omatography -	U U Qualifier Soluble	49.9 49.9 49.9 <b>Limits</b> 70 - 130	mg/Kg	<u>D</u>	01/26/22 08:15 01/26/22 08:15 01/26/22 08:15 Prepared 01/26/22 08:15	01/26/22 12:17 01/26/22 12:17 01/26/22 12:17 Analyzed 01/26/22 12:17	Dil Fac
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	<49.9 <49.9 <49.9  **Recovery 72 82  omatography -	U U U <b>Qualifier</b>	49.9 49.9 49.9 <b>Limits</b> 70 - 130	mg/Kg	<u>D</u>	01/26/22 08:15 01/26/22 08:15 01/26/22 08:15 Prepared 01/26/22 08:15	01/26/22 12:17 01/26/22 12:17 01/26/22 12:17 Analyzed 01/26/22 12:17	Dil Fac

Client Sample ID: PH01A

Date Collected: 01/18/22 10:15 Date Received: 01/21/22 15:25

Sample Depth: 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/25/22 16:00	01/25/22 20:16	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/25/22 16:00	01/25/22 20:16	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/25/22 16:00	01/25/22 20:16	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/25/22 16:00	01/25/22 20:16	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/25/22 16:00	01/25/22 20:16	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/25/22 16:00	01/25/22 20:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			01/25/22 16:00	01/25/22 20:16	

**Eurofins Carlsbad** 

Lab Sample ID: 890-1856-2

Matrix: Solid

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1/20/2022

Lab Sample ID: 890-1856-2

Client: WSP USA Inc. Job ID: 890-1856-1
Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

**Client Sample ID: PH01A** 

Date Collected: 01/18/22 10:15 Date Received: 01/21/22 15:25

Sample Depth: 2

Method: 8021B - Volatile O	rganic Compou	nds (GC)	(Continued)
Michiga: OUL 1B Volume C	i gaino compou	1145 (55)	(Goillinaca)

Surrogate	%Recovery C	Qualifier Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	103	70 - 130	01/25/22 16:00	01/25/22 20:16	1

ı	Mothodi	Total DTEV	- Total BTEX	Coloulation
ı	wethou.	TOTAL DIEV	- IUIAI DIEA	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/28/22 14:15	1

Method: 8015 NM - Diesel	Range Organics (DRO) (GO	2)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/27/22 16:10	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		01/26/22 08:15	01/26/22 13:24	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/26/22 08:15	01/26/22 13:24	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/26/22 08:15	01/26/22 13:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surroyate	Mecovery Qualifier	Liliits		rrepareu	Allalyzeu	DII Fac
1-Chlorooctane	72	70 - 130	_	01/26/22 08:15	01/26/22 13:24	1
o-Terphenyl	81	70 - 130		01/26/22 08:15	01/26/22 13:24	1
_						

Method: 300.0 - Anions, Ion Chromatography - Soluble	Method: 300.0	0 - Anions, ion	Chromatography - Soluble
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Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	221	4.96	mg/Kg			01/28/22 04:51	1

Client Sample ID: PH02

Date Collected: 01/18/22 10:30

Lab Sample ID: 890-1856-3

Matrix: Solid

Date Collected: 01/18/22 10:30 Date Received: 01/21/22 15:25

Sample Depth: 1

Mathadi 0004D	Valatile Overen	ic Compounds (GC)
Memoo: Auzib	- voianie Urdan	ic Compounds (GC)

wethout ouz 16 - volatile Orga	(GC)							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/25/22 16:00	01/25/22 20:44	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/25/22 16:00	01/25/22 20:44	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/25/22 16:00	01/25/22 20:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/25/22 16:00	01/25/22 20:44	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/25/22 16:00	01/25/22 20:44	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/25/22 16:00	01/25/22 20:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130			01/25/22 16:00	01/25/22 20:44	1
1,4-Difluorobenzene (Surr)	105		70 - 130			01/25/22 16:00	01/25/22 20:44	1

Mothod:	Total RTFX	. Total RTFX	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/28/22 14:15	1

	Method: 8015 NM - Diesel	Range Organics (DRO	D) (GC)	۱
ı	Michiga. 00 to Min - Diese	i italige Organics (Ditt		,

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 U	50.0	mg/Kg			01/27/22 16:10	1

**Eurofins Carlsbad** 

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Client: WSP USA Inc. Job ID: 890-1856-1 Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

**Client Sample ID: PH02** Lab Sample ID: 890-1856-3

Date Collected: 01/18/22 10:30 Date Received: 01/21/22 15:25

2720

Matrix: Solid

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/26/22 08:15	01/26/22 13:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/26/22 08:15	01/26/22 13:46	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/26/22 08:15	01/26/22 13:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	79		70 - 130			01/26/22 08:15	01/26/22 13:46	1
o-Terphenyl	92		70 - 130			01/26/22 08:15	01/26/22 13:46	1

Client Sample ID: PH02A Lab Sample ID: 890-1856-4 Matrix: Solid

25.0

mg/Kg

Date Collected: 01/18/22 10:45 Date Received: 01/21/22 15:25

Sample Depth: 2

Chloride

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/25/22 16:00	01/25/22 21:12	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/25/22 16:00	01/25/22 21:12	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/25/22 16:00	01/25/22 21:12	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/25/22 16:00	01/25/22 21:12	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/25/22 16:00	01/25/22 21:12	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/25/22 16:00	01/25/22 21:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130			01/25/22 16:00	01/25/22 21:12	1
1,4-Difluorobenzene (Surr)	89		70 - 130			01/25/22 16:00	01/25/22 21:12	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/28/22 14:15	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/27/22 16:10	1
Method: 8015B NM - Diesel Rang	je Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		01/26/22 08:15	01/26/22 14:08	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/26/22 08:15	01/26/22 14:08	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/26/22 08:15	01/26/22 14:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130			01/26/22 08:15	01/26/22 14:08	1
o-Terphenyl	102		70 - 130			01/26/22 08:15	01/26/22 14:08	1

**Eurofins Carlsbad** 

01/28/22 05:03

Released to Imaging: 2/16/2022 12:59:48 PM

Client: WSP USA Inc. Project/Site: PLU #423

Job ID: 890-1856-1

SDG: 31403236.029 TASK #06.02

Client Sample ID: PH02A

Date Collected: 01/18/22 10:45 Date Received: 01/21/22 15:25

Sample Depth: 2

Lab Sample ID: 890-1856-4

Matrix: Solid

Method: 300.0 - Anions, Ion Chron	natography - S	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	690		24.9	mg/Kg			01/28/22 05:15	5

Lab Sample ID: 890-1856-5 **Client Sample ID: FS03** Matrix: Solid

Date Collected: 01/18/22 14:40 Date Received: 01/21/22 15:25

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/25/22 16:00	01/25/22 21:40	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/25/22 16:00	01/25/22 21:40	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/25/22 16:00	01/25/22 21:40	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		01/25/22 16:00	01/25/22 21:40	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/25/22 16:00	01/25/22 21:40	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/25/22 16:00	01/25/22 21:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130			01/25/22 16:00	01/25/22 21:40	1
1,4-Difluorobenzene (Surr)	93		70 - 130			01/25/22 16:00	01/25/22 21:40	1
- Method: Total BTEX - Total BT	TEX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			01/28/22 14:15	

Method: 8015 NM - Diesel Range C	Organics (DRO) (GC)						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 U	50.0	ma/Ka			01/27/22 16:10	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		01/26/22 08:15	01/26/22 14:52	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		01/26/22 08:15	01/26/22 14:52	1
C10-C28)								
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/26/22 08:15	01/26/22 14:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130			01/26/22 08:15	01/26/22 14:52	1
o-Terphenyl	85		70 - 130			01/26/22 08:15	01/26/22 14:52	1

Method: 300.0 - Anions, Ion Chrom	natography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	160		5.00	mg/Kg			01/28/22 05:26	1

# **Client Sample Results**

Client: WSP USA Inc.

Job ID: 890-1856-1

Project/Site: PLU #423

SDG: 31403236 029 TASK #06 02

Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

Client Sample ID: FS02 Lab Sample ID: 890-1856-6

Date Collected: 01/18/22 14:45
Date Received: 01/21/22 15:25

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		01/25/22 16:00	01/25/22 22:08	1
Toluene	<0.00202	U	0.00202	mg/Kg		01/25/22 16:00	01/25/22 22:08	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/25/22 16:00	01/25/22 22:08	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		01/25/22 16:00	01/25/22 22:08	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/25/22 16:00	01/25/22 22:08	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		01/25/22 16:00	01/25/22 22:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	178	S1+	70 - 130			01/25/22 16:00	01/25/22 22:08	1
1,4-Difluorobenzene (Surr)	79		70 - 130			01/25/22 16:00	01/25/22 22:08	1
- Method: Total BTEX - Total BTEX	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			01/28/22 14:15	1
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
							•	Diriac
Total TPH	<50.0	U	50.0	mg/Kg			01/27/22 16:10	1
- <sup></sup> -			50.0	mg/Kg			01/27/22 16:10	
Method: 8015B NM - Diesel Ranç	ge Organics (D		50.0 RL	mg/Kg Unit	D	Prepared	01/27/22 16:10  Analyzed	
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	ge Organics (D	RO) (GC)  Qualifier			D	Prepared 01/26/22 08:15		1
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	ge Organics (D	RO) (GC)  Qualifier	RL	Unit	<u>D</u>		Analyzed	1 Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	ge Organics (D Result <50.0	RO) (GC) Qualifier U	RL 50.0	<mark>Unit</mark> mg/Kg	<u>D</u>	01/26/22 08:15	<b>Analyzed</b> 01/26/22 15:13	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	ge Organics (D Result <50.0	RO) (GC) Qualifier U	<b>RL</b> 50.0	<mark>Unit</mark> mg/Kg mg/Kg	<u>D</u>	01/26/22 08:15	Analyzed 01/26/22 15:13 01/26/22 15:13	1 Dil Fac 1 1
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	ge Organics (D) Result <50.0 <50.0 <50.0	RO) (GC) Qualifier U	RL 50.0 50.0 50.0	<mark>Unit</mark> mg/Kg mg/Kg	<u>D</u>	01/26/22 08:15 01/26/22 08:15 01/26/22 08:15	Analyzed 01/26/22 15:13 01/26/22 15:13 01/26/22 15:13	1 Dil Fac 1 1
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	ge Organics (D)  Result  <50.0  <50.0  <80.0  **Recovery**	RO) (GC) Qualifier U	RL 50.0 50.0 50.0 <i>Limits</i>	<mark>Unit</mark> mg/Kg mg/Kg	<u>D</u>	01/26/22 08:15 01/26/22 08:15 01/26/22 08:15 Prepared	Analyzed 01/26/22 15:13 01/26/22 15:13 01/26/22 15:13 Analyzed	Dil Fac  1  1  Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	ge Organics (D)  Result  <50.0  <50.0  <50.0  <86  98	RO) (GC) Qualifier U U Qualifier	RL 50.0 50.0 50.0 Limits 70 - 130	<mark>Unit</mark> mg/Kg mg/Kg	<u>D</u>	01/26/22 08:15 01/26/22 08:15 01/26/22 08:15 Prepared 01/26/22 08:15	Analyzed 01/26/22 15:13 01/26/22 15:13 01/26/22 15:13 Analyzed 01/26/22 15:13	1 Dil Fac 1 Dil Fac 1
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	ge Organics (D)  Result  <50.0  <50.0  <50.0   **Recovery**  86  98  omatography -	RO) (GC) Qualifier U U Qualifier	RL 50.0 50.0 50.0 Limits 70 - 130	<mark>Unit</mark> mg/Kg mg/Kg	<u>D</u>	01/26/22 08:15 01/26/22 08:15 01/26/22 08:15 Prepared 01/26/22 08:15	Analyzed 01/26/22 15:13 01/26/22 15:13 01/26/22 15:13 Analyzed 01/26/22 15:13	1 Dil Fac 1 Dil Fac 1

Client Sample ID: FS01

Date Collected: 01/18/22 14:50

Lab Sample ID: 890-1856-7

Matrix: Solid

Date Collected: 01/18/22 14:50 Date Received: 01/21/22 15:25

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/25/22 16:00	01/25/22 22:37	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/25/22 16:00	01/25/22 22:37	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/25/22 16:00	01/25/22 22:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/25/22 16:00	01/25/22 22:37	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/25/22 16:00	01/25/22 22:37	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/25/22 16:00	01/25/22 22:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130			01/25/22 16:00	01/25/22 22:37	1

**Eurofins Carlsbad** 

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Lab Sample ID: 890-1856-7

Client: WSP USA Inc. Job ID: 890-1856-1 Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

**Client Sample ID: FS01** 

Date Collected: 01/18/22 14:50 Date Received: 01/21/22 15:25

Sample Depth: 1

Method: 8021B - Volati	le Organic Comp	ounds (GC)	(Continued)
modifical coaling foliati	io organico comp	, o a a o , o o ,	( Continuou,

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	104	70 - 130	01/25/22 16:00	01/25/22 22:37	1

			V	
Method:	lotal BIEX	- Iotai	RIEX	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/28/22 14:15	1

П			
	Method: 8015 NM - Diesel Range Organics (DRO) (	CC	
ı	Welliou. 00 13 NW - Diesel Kalige Organics (DRO)	901	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/27/22 16:10	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		01/26/22 08:15	01/26/22 15:36	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		01/26/22 08:15	01/26/22 15:36	1
C10-C28)								
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/26/22 08:15	01/26/22 15:36	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

· · · · · · · · · · · · · · · · ·	,	<b>~</b>	
1-Chlorooctane	82		70 - 130
o-Terphenyl	91		70 - 130

1-Chlorooctane	82	70 - 130	01/26/22 08:15	01/26/22 15:36	1
o-Terphenyl	91	70 - 130	01/26/22 08:15	01/26/22 15:36	1
Method: 200 0 Anione lon Chri	ometerwenky Caluble				
Method: 300.0 - Anions, Ion Chro	omatography - Soluble				

Analyte	Result Qualifier	KL	Unit	U	Prepared	Analyzeu	Dii Fac
Chloride	726	5.00	mg/Kg			01/27/22 19:36	1

Lab Sample ID: 890-1856-8 **Client Sample ID: FS04** Date Collected: 01/18/22 15:00 **Matrix: Solid** 

Date Received: 01/21/22 15:25

Sample Depth: 1

momous colling and and colling and		()						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/25/22 16:00	01/25/22 23:05	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/25/22 16:00	01/25/22 23:05	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/25/22 16:00	01/25/22 23:05	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/25/22 16:00	01/25/22 23:05	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/25/22 16:00	01/25/22 23:05	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/25/22 16:00	01/25/22 23:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130			01/25/22 16:00	01/25/22 23:05	1
1,4-Difluorobenzene (Surr)	99		70 - 130			01/25/22 16:00	01/25/22 23:05	1

Mothod:	Total RTEY	- Total RTFY	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg		_	01/28/22 14:15	1

	Method: 8015 NM - Diesel	Range Organics (DRO	D) (GC)	۱
ı	Michiga. 00 to Min - Diese	i italige Organics (Ditt		,

Analyte	•	•	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH			<49.9	U	49.9	mg/Kg			01/27/22 16:10	1

Lab Sample ID: 890-1856-8

01/27/22 19:44

# **Client Sample Results**

 Client: WSP USA Inc.
 Job ID: 890-1856-1

 Project/Site: PLU #423
 SDG: 31403236.029 TASK #06.02

Client Sample ID: FS04

Date Collected: 01/18/22 15:00 Date Received: 01/21/22 15:25

Sample Depth: 1

Chloride

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		01/26/22 08:15	01/26/22 15:57	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		01/26/22 08:15	01/26/22 15:57	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/26/22 08:15	01/26/22 15:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130			01/26/22 08:15	01/26/22 15:57	1
o-Terphenyl	98		70 - 130			01/26/22 08:15	01/26/22 15:57	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

5.01

mg/Kg

613

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# **Surrogate Summary**

Client: WSP USA Inc. Job ID: 890-1856-1
Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-1855-A-1-D MS	Matrix Spike	115	113	
890-1855-A-1-E MSD	Matrix Spike Duplicate	110	109	
890-1856-1	PH01	163 S1+	95	
890-1856-2	PH01A	119	103	
890-1856-3	PH02	119	105	
890-1856-4	PH02A	93	89	
890-1856-5	FS03	97	93	
890-1856-6	FS02	178 S1+	79	
890-1856-7	FS01	120	104	
890-1856-8	FS04	112	99	
LCS 880-17655/1-A	Lab Control Sample	103	106	
LCSD 880-17655/2-A	Lab Control Sample Dup	106	110	
MB 880-17655/5-A	Method Blank	75	91	

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
b Sample ID	Client Sample ID	(70-130)	(70-130)	
0-1856-1	PH01	72	82	
0-1856-1 MS	PH01	75	75	
0-1856-1 MSD	PH01	68 S1-	69 S1-	
0-1856-2	PH01A	72	81	
0-1856-3	PH02	79	92	
0-1856-4	PH02A	86	102	
0-1856-5	FS03	78	85	
0-1856-6	FS02	86	98	
0-1856-7	FS01	82	91	
0-1856-8	FS04	86	98	
S 880-17748/2-A	Lab Control Sample	103	110	
CSD 880-17748/3-A	Lab Control Sample Dup	102	108	
3 880-17748/1-A	Method Blank	93	110	

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: WSP USA Inc. Job ID: 890-1856-1 Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-17655/5-A

Lab Sample ID: LCS 880-17655/1-A

**Matrix: Solid** Analysis Batch: 17656 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 17655

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/25/22 07:25	01/25/22 11:16	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/25/22 07:25	01/25/22 11:16	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/25/22 07:25	01/25/22 11:16	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/25/22 07:25	01/25/22 11:16	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/25/22 07:25	01/25/22 11:16	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/25/22 07:25	01/25/22 11:16	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	75		70 - 130	01/25/22 07	25 01/25/22 11:16	1
1,4-Difluorobenzene (Surr)	91		70 - 130	01/25/22 07	25 01/25/22 11:16	1

Client Sample ID: Lab Control Sample

Matrix: Solid Prep Type: Total/NA Analysis Batch: 17656 Prep Batch: 17655

	Spike	LUS	LUS				MREC.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1138		mg/Kg		114	70 - 130	
Toluene	0.100	0.09497		mg/Kg		95	70 - 130	
Ethylbenzene	0.100	0.09457		mg/Kg		95	70 - 130	
m-Xylene & p-Xylene	0.200	0.2089		mg/Kg		104	70 - 130	
o-Xylene	0.100	0.1104		mg/Kg		110	70 - 130	

LCS LCS

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

Lab Sample ID: LCSD 880-17655/2-A **Client Sample ID: Lab Control Sample Dup** 

Matrix: Solid

Analysis Batch: 17656

Prep Type: Total/NA Prep Batch: 17655

	Spike	LCSD	LCSD				%Rec.		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.1103		mg/Kg		110	70 - 130	3	35	
Toluene	0.100	0.09292		mg/Kg		93	70 - 130	2	35	
Ethylbenzene	0.100	0.09271		mg/Kg		93	70 - 130	2	35	
m-Xylene & p-Xylene	0.200	0.2046		mg/Kg		102	70 - 130	2	35	
o-Xylene	0.100	0.1082		mg/Kg		108	70 - 130	2	35	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

Lab Sample ID: 890-1855-A-1-E MSD

Matrix: Solid

Analysis Batch: 17656

Client Sample	ID:	Matrix	Spike	Duplicate	

Prep Type: Total/NA Prep Batch: 17655

•	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00198	U	0.0994	0.1108		mg/Kg					
Toluene	<0.00198	U	0.0994	0.09407		mg/Kg					

Client: WSP USA Inc. Job ID: 890-1856-1 Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

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

Lab Sample ID: 890-1855-A-1-E MSD **Matrix: Solid** 

Analysis Batch: 17656

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA Prep Batch: 17655

Sample Sample Spike MSD MSD %Rec. **RPD** Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits **RPD** Limit Ethylbenzene <0.00198 U 0.0994 0.09294 mg/Kg m-Xylene & p-Xylene <0.00396 0.199 0.2040 mg/Kg 0.0994 0.1082 o-Xylene <0.00198 U mg/Kg

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Lab Sample ID: 890-1855-A-1-D MS

**Matrix: Solid** 

Analysis Batch: 17656

Client Sample ID: Matrix Spike

Prep Type: Total/NA

MS MS Limits Surrogate %Recovery Qualifier 4-Bromofluorobenzene (Surr) 115 70 - 130 70 - 130 1,4-Difluorobenzene (Surr) 113

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

Lab Sample ID: MB 880-17748/1-A

**Matrix: Solid** 

Analysis Batch: 17750

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 17748

MR MR Result Qualifier RL Unit Prepared Analyte Analyzed Dil Fac <50.0 U 50.0 01/26/22 08:15 01/26/22 11:10 Gasoline Range Organics mg/Kg (GRO)-C6-C10 50.0 01/26/22 08:15 01/26/22 11:10 Diesel Range Organics (Over <50.0 U mg/Kg C10-C28) OII Range Organics (Over C28-C36) <50.0 U 50.0 01/26/22 08:15 01/26/22 11:10 mg/Kg

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130	01/26/22 08:15	01/26/22 11:10	1
o-Terphenyl	110		70 - 130	01/26/22 08:15	01/26/22 11:10	1

Lab Sample ID: LCS 880-17748/2-A

**Matrix: Solid** 

**Analysis Batch: 17750** 

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 17748

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit Limits Gasoline Range Organics 1000 704.4 70 70 - 130 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 956.5 mg/Kg 96 70 - 130

C10-C28)

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	110		70 - 130

## QC Sample Results

Client: WSP USA Inc. Job ID: 890-1856-1 Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

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

Lab	Sample	ID:	LCSD	880-1	7748/3-A

Matrix: Solid

**Analysis Batch: 17750** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 17748 RPD RPD Limit %Rec Limits D

Spike LCSD LCSD Analyte Added Result Qualifier Unit Gasoline Range Organics 1000 698.5 mg/Kg 70 70 - 130 20 (GRO)-C6-C10 1000 Diesel Range Organics (Over 957.2 mg/Kg 96 70 - 130 n 20 C10-C28)

LCSD LCSD Qualifier Limits Surrogate %Recovery 70 - 130 1-Chlorooctane 102 o-Terphenyl 108 70 - 130

Lab Sample ID: 890-1856-1 MS **Matrix: Solid** 

**Analysis Batch: 17750** 

**Client Sample ID: PH01** Prep Type: Total/NA

Prep Batch: 17748

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	971.2		mg/Kg		97	70 - 130	
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1089		mg/Kg		109	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	75	70 - 130
o-Terphenyl	75	70 - 130

Lab Sample ID: 890-1856-1 MSD

**Matrix: Solid** 

**Analysis Batch: 17750** 

**Client Sample ID: PH01** 

Prep Type: Total/NA Prep Batch: 17748

Sample Sample Spike MSD MSD %Rec. **RPD** Added Limit Analyte Result Qualifier Result Qualifier Unit %Rec Limits RPD Gasoline Range Organics <49.9 U 996 914.4 92 20 70 - 130 6 mg/Kg (GRO)-C6-C10 <49.9 U 996 979.4 98 70 - 130 Diesel Range Organics (Over mg/Kg 11 20 C10-C28)

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	68	S1-	70 - 130
o-Terphenyl	69	S1-	70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-17706/1-A

**Matrix: Solid** 

Analysis Batch: 17736

Client Sample ID: Method Blank

**Prep Type: Soluble** 

MB MB

Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac D Chloride <5.00 U 5.00 01/27/22 23:31 mg/Kg

Job ID: 890-1856-1

SDG: 31403236.029 TASK #06.02

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-17706/2-A

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

**Analysis Batch: 17736** 

**Matrix: Solid** 

Client: WSP USA Inc.

Project/Site: PLU #423

LCS LCS %Rec. Spike Analyte Added Result Qualifier %Rec Limits Unit Chloride 250 248.7 mg/Kg 99 90 - 110

Lab Sample ID: LCSD 880-17706/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 17736** 

Spike LCSD LCSD %Rec. RPD Added Analyte Result Qualifier Unit D %Rec Limits RPD Limit Chloride 250 249.2 mg/Kg 100 90 - 110 0

Lab Sample ID: 890-1855-A-8-D MS Client Sample ID: Matrix Spike **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 17736

Spike MS MS %Rec. Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride <5.00 U 250 255.9 mg/Kg 102 90 - 110

Lab Sample ID: 890-1855-A-8-E MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 17736** 

Sample Sample MSD MSD RPD Spike %Rec. Result Qualifier Added Analyte Result Qualifier Unit %Rec Limits RPD Limit Chloride <5.00 250 254.1 102 90 - 110 20 mg/Kg

Lab Sample ID: MB 880-17707/1-A Client Sample ID: Method Blank **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 17737** 

MR MR

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

Lab Sample ID: LCS 880-17707/2-A Client Sample ID: Lab Control Sample Matrix: Solid **Prep Type: Soluble** 

**Analysis Batch: 17737** 

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

Lab Sample ID: LCSD 880-17707/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 17737** 

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

Lab Sample ID: 880-10478-A-1-E MS Client Sample ID: Matrix Spike **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 17737** 

Spike MS MS %Rec. Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 624 F1 250 1002 F1 mg/Kg 152 90 - 110

# **QC Sample Results**

Job ID: 890-1856-1 Client: WSP USA Inc. Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-10478-A-1-F MSD

**Client Sample ID: Matrix Spike Duplicate Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 17737** 

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	624	F1	250	985.1	F1	mg/Kg		145	90 - 110	2	20

# **QC Association Summary**

Client: WSP USA Inc. Job ID: 890-1856-1 Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

**GC VOA** 

Prep Batch: 17655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1856-1	PH01	Total/NA	Solid	5035	
890-1856-2	PH01A	Total/NA	Solid	5035	
890-1856-3	PH02	Total/NA	Solid	5035	
890-1856-4	PH02A	Total/NA	Solid	5035	
890-1856-5	FS03	Total/NA	Solid	5035	
890-1856-6	FS02	Total/NA	Solid	5035	
890-1856-7	FS01	Total/NA	Solid	5035	
890-1856-8	FS04	Total/NA	Solid	5035	
MB 880-17655/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-17655/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-17655/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1855-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 17656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1856-1	PH01	Total/NA	Solid	8021B	17655
890-1856-2	PH01A	Total/NA	Solid	8021B	17655
890-1856-3	PH02	Total/NA	Solid	8021B	17655
890-1856-4	PH02A	Total/NA	Solid	8021B	17655
890-1856-5	FS03	Total/NA	Solid	8021B	17655
890-1856-6	FS02	Total/NA	Solid	8021B	17655
890-1856-7	FS01	Total/NA	Solid	8021B	17655
890-1856-8	FS04	Total/NA	Solid	8021B	17655
MB 880-17655/5-A	Method Blank	Total/NA	Solid	8021B	17655
LCS 880-17655/1-A	Lab Control Sample	Total/NA	Solid	8021B	17655
LCSD 880-17655/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	17655
890-1855-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	
890-1855-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	17655

Analysis Batch: 18058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1856-1	PH01	Total/NA	Solid	Total BTEX	
890-1856-2	PH01A	Total/NA	Solid	Total BTEX	
890-1856-3	PH02	Total/NA	Solid	Total BTEX	
890-1856-4	PH02A	Total/NA	Solid	Total BTEX	
890-1856-5	FS03	Total/NA	Solid	Total BTEX	
890-1856-6	FS02	Total/NA	Solid	Total BTEX	
890-1856-7	FS01	Total/NA	Solid	Total BTEX	
890-1856-8	FS04	Total/NA	Solid	Total BTEX	

**GC Semi VOA** 

Prep Batch: 17748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1856-1	PH01	Total/NA	Solid	8015NM Prep	
890-1856-2	PH01A	Total/NA	Solid	8015NM Prep	
890-1856-3	PH02	Total/NA	Solid	8015NM Prep	
890-1856-4	PH02A	Total/NA	Solid	8015NM Prep	
890-1856-5	FS03	Total/NA	Solid	8015NM Prep	
890-1856-6	FS02	Total/NA	Solid	8015NM Prep	
890-1856-7	FS01	Total/NA	Solid	8015NM Prep	

# **QC Association Summary**

Job ID: 890-1856-1 Client: WSP USA Inc. Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

# **GC Semi VOA (Continued)**

#### Prep Batch: 17748 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1856-8	FS04	Total/NA	Solid	8015NM Prep	
MB 880-17748/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-17748/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-17748/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1856-1 MS	PH01	Total/NA	Solid	8015NM Prep	
890-1856-1 MSD	PH01	Total/NA	Solid	8015NM Prep	

#### **Analysis Batch: 17750**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1856-1	PH01	Total/NA	Solid	8015B NM	17748
890-1856-2	PH01A	Total/NA	Solid	8015B NM	17748
890-1856-3	PH02	Total/NA	Solid	8015B NM	17748
890-1856-4	PH02A	Total/NA	Solid	8015B NM	17748
890-1856-5	FS03	Total/NA	Solid	8015B NM	17748
890-1856-6	FS02	Total/NA	Solid	8015B NM	17748
890-1856-7	FS01	Total/NA	Solid	8015B NM	17748
890-1856-8	FS04	Total/NA	Solid	8015B NM	17748
MB 880-17748/1-A	Method Blank	Total/NA	Solid	8015B NM	17748
LCS 880-17748/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	17748
LCSD 880-17748/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	17748
890-1856-1 MS	PH01	Total/NA	Solid	8015B NM	17748
890-1856-1 MSD	PH01	Total/NA	Solid	8015B NM	17748

#### Analysis Batch: 17951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1856-1	PH01	Total/NA	Solid	8015 NM	
890-1856-2	PH01A	Total/NA	Solid	8015 NM	
890-1856-3	PH02	Total/NA	Solid	8015 NM	
890-1856-4	PH02A	Total/NA	Solid	8015 NM	
890-1856-5	FS03	Total/NA	Solid	8015 NM	
890-1856-6	FS02	Total/NA	Solid	8015 NM	
890-1856-7	FS01	Total/NA	Solid	8015 NM	
890-1856-8	FS04	Total/NA	Solid	8015 NM	

#### **HPLC/IC**

#### Leach Batch: 17706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1856-1	PH01	Soluble	Solid	DI Leach	
890-1856-2	PH01A	Soluble	Solid	DI Leach	
890-1856-3	PH02	Soluble	Solid	DI Leach	
890-1856-4	PH02A	Soluble	Solid	DI Leach	
890-1856-5	FS03	Soluble	Solid	DI Leach	
MB 880-17706/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-17706/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-17706/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1855-A-8-D MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1855-A-8-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

# **QC Association Summary**

 Client: WSP USA Inc.
 Job ID: 890-1856-1

 Project/Site: PLU #423
 SDG: 31403236.029 TASK #06.02

#### HPLC/IC

#### Leach Batch: 17707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1856-6	FS02	Soluble	Solid	DI Leach	
890-1856-7	FS01	Soluble	Solid	DI Leach	
890-1856-8	FS04	Soluble	Solid	DI Leach	
MB 880-17707/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-17707/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-17707/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-10478-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-10478-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 17736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1856-1	PH01	Soluble	Solid	300.0	17706
890-1856-2	PH01A	Soluble	Solid	300.0	17706
890-1856-3	PH02	Soluble	Solid	300.0	17706
890-1856-4	PH02A	Soluble	Solid	300.0	17706
890-1856-5	FS03	Soluble	Solid	300.0	17706
MB 880-17706/1-A	Method Blank	Soluble	Solid	300.0	17706
LCS 880-17706/2-A	Lab Control Sample	Soluble	Solid	300.0	17706
LCSD 880-17706/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	17706
890-1855-A-8-D MS	Matrix Spike	Soluble	Solid	300.0	17706
890-1855-A-8-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	17706

#### **Analysis Batch: 17737**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1856-6	FS02	Soluble	Solid	300.0	17707
890-1856-7	FS01	Soluble	Solid	300.0	17707
890-1856-8	FS04	Soluble	Solid	300.0	17707
MB 880-17707/1-A	Method Blank	Soluble	Solid	300.0	17707
LCS 880-17707/2-A	Lab Control Sample	Soluble	Solid	300.0	17707
LCSD 880-17707/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	17707
880-10478-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	17707
880-10478-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	17707

**Eurofins Carlsbad** 

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Client: WSP USA Inc. Job ID: 890-1856-1 Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

Lab Sample ID: 890-1856-1

**Client Sample ID: PH01** Date Collected: 01/18/22 10:00 Date Received: 01/21/22 15:25

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17655	01/25/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	17656	01/25/22 19:48	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	18058	01/28/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17951	01/27/22 16:10	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17748	01/26/22 08:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17750	01/26/22 12:17	AJ	XEN MID
Soluble	Leach	DI Leach			17706	01/25/22 12:28	СН	XEN MID
Soluble	Analysis	300.0		1	17736	01/28/22 04:39	CH	XEN MID

**Client Sample ID: PH01A** Lab Sample ID: 890-1856-2

Date Collected: 01/18/22 10:15 **Matrix: Solid** Date Received: 01/21/22 15:25

Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab 5035 XEN MID Total/NA Prep 17655 01/25/22 16:00 KL Total/NA 8021B 01/25/22 20:16 XEN MID Analysis 1 17656 MR Total/NA Total BTEX 18058 01/28/22 14:15 XEN MID Analysis 1 A.I Total/NA Analysis 8015 NM 17951 01/27/22 16:10 XEN MID Total/NA XEN MID Prep 8015NM Prep 17748 01/26/22 08:15 DM Total/NA Analysis 8015B NM 17750 01/26/22 13:24 AJ XEN MID Soluble XEN MID Leach DI Leach 17706 01/25/22 12:28 CH Soluble Analysis 300.0 1 17736 01/28/22 04:51 CH XEN MID

Lab Sample ID: 890-1856-3 **Client Sample ID: PH02** 

Date Collected: 01/18/22 10:30 **Matrix: Solid** Date Received: 01/21/22 15:25

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17655	01/25/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	17656	01/25/22 20:44	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	18058	01/28/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17951	01/27/22 16:10	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17748	01/26/22 08:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17750	01/26/22 13:46	AJ	XEN MID
Soluble	Leach	DI Leach			17706	01/25/22 12:28	CH	XEN MID
Soluble	Analysis	300.0		5	17736	01/28/22 05:03	CH	XEN MID

Client Sample ID: PH02A Lab Sample ID: 890-1856-4 Date Collected: 01/18/22 10:45 **Matrix: Solid** 

Date Received: 01/21/22 15:25

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17655	01/25/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	17656	01/25/22 21:12	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	18058	01/28/22 14:15	AJ	XEN MID

Client: WSP USA Inc. Job ID: 890-1856-1 Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

Client Sample ID: PH02A

Date Received: 01/21/22 15:25

Lab Sample ID: 890-1856-4 Date Collected: 01/18/22 10:45

Matrix: Solid

Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab 8015 NM Total/NA Analysis 17951 01/27/22 16:10 AJ XEN MID Total/NA Prep 8015NM Prep 17748 01/26/22 08:15 DM XEN MID Total/NA Analysis 8015B NM 17750 01/26/22 14:08 AJ XEN MID 01/25/22 12:28 XEN MID Soluble Leach DI Leach 17706 CH 300.0 01/28/22 05:15 XEN MID Soluble Analysis 5 17736 СН

**Client Sample ID: FS03** Lab Sample ID: 890-1856-5

Date Collected: 01/18/22 14:40 **Matrix: Solid** 

Date Received: 01/21/22 15:25

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17655	01/25/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	17656	01/25/22 21:40	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	18058	01/28/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17951	01/27/22 16:10	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17748	01/26/22 08:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17750	01/26/22 14:52	AJ	XEN MID
Soluble	Leach	DI Leach			17706	01/25/22 12:28	CH	XEN MID
Soluble	Analysis	300.0		1	17736	01/28/22 05:26	CH	XEN MID

**Client Sample ID: FS02** Lab Sample ID: 890-1856-6

Date Collected: 01/18/22 14:45 Date Received: 01/21/22 15:25

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17655	01/25/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	17656	01/25/22 22:08	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	18058	01/28/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17951	01/27/22 16:10	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17748	01/26/22 08:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17750	01/26/22 15:13	AJ	XEN MID
Soluble	Leach	DI Leach			17707	01/25/22 12:33	СН	XEN MID
Soluble	Analysis	300.0		10	17737	01/27/22 19:29	CH	XEN MID

Client Sample ID: FS01 Lab Sample ID: 890-1856-7

Date Collected: 01/18/22 14:50 Date Received: 01/21/22 15:25

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17655	01/25/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	17656	01/25/22 22:37	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	18058	01/28/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17951	01/27/22 16:10	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17748	01/26/22 08:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17750	01/26/22 15:36	AJ	XEN MID

**Eurofins Carlsbad** 

**Matrix: Solid** 

**Matrix: Solid** 

#### **Lab Chronicle**

Client: WSP USA Inc. Job ID: 890-1856-1 Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

**Client Sample ID: FS01** 

Date Collected: 01/18/22 14:50 Date Received: 01/21/22 15:25 Lab Sample ID: 890-1856-7

Matrix: Solid

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			17707	01/25/22 12:33	СН	XEN MID
Soluble	Analysis	300.0		1	17737	01/27/22 19:36	CH	XEN MID

**Client Sample ID: FS04** Lab Sample ID: 890-1856-8

Date Collected: 01/18/22 15:00 Date Received: 01/21/22 15:25 **Matrix: Solid** 

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17655	01/25/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	17656	01/25/22 23:05	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	18058	01/28/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17951	01/27/22 16:10	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17748	01/26/22 08:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17750	01/26/22 15:57	AJ	XEN MID
Soluble	Leach	DI Leach			17707	01/25/22 12:33	СН	XEN MID
Soluble	Analysis	300.0		1	17737	01/27/22 19:44	CH	XEN MID

**Laboratory References:** 

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

# **Accreditation/Certification Summary**

Client: WSP USA Inc. Job ID: 890-1856-1
Project/Site: PLU #423 SDG: 31403236.029 TASK #06.02

#### **Laboratory: Eurofins Midland**

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

Authority	F	Program	Identification Number	Expiration Date
Texas	N	NELAP	T104704400-21-22	06-30-22
The following analytes the agency does not of		but the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for which
Analysis Method	Prep Method	Matrix	Analyte	
8015 NM		Solid	Total TPH	
Total BTEX		Solid	Total BTEX	

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# **Method Summary**

Client: WSP USA Inc. Job ID: 890-1856-1 Project/Site: PLU #423 SDG: 3140323

36.029 TASK #06.02	
30.029 IASK #00.02	

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

#### **Protocol References:**

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

FS04

890-1856-8

# **Sample Summary**

 Client: WSP USA Inc.
 Job ID: 890-1856-1

 Project/Site: PLU #423
 SDG: 31403236.029 TASK #06.02

Solid

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1856-1	PH01	Solid	01/18/22 10:00	01/21/22 15:25	1
890-1856-2	PH01A	Solid	01/18/22 10:15	01/21/22 15:25	2
890-1856-3	PH02	Solid	01/18/22 10:30	01/21/22 15:25	1
890-1856-4	PH02A	Solid	01/18/22 10:45	01/21/22 15:25	2
890-1856-5	FS03	Solid	01/18/22 14:40	01/21/22 15:25	1
890-1856-6	FS02	Solid	01/18/22 14:45	01/21/22 15:25	1
890-1856-7	FS01	Solid	01/18/22 14:50	01/21/22 15:25	1

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Project Manager: Company Name:

WSP USA Inc. Benjamin Bellil

Houston, TX (281) 240-4200

Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

Bill to: (if different) Company Name:

XTO Energy Kyle Littrell

**Work Order Comments** 

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	will be enforced unless previously negotlated.	yzed. These terms will be enforced unless	, but not anal	ed to Xenco	submitte	for each sample	d a charge of \$5	each project and	00 will be applied to	charge of \$75.	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
	tractors. It assigns standard terms and conditions losses are due to circumstances beyond the control	illates and subcontractors. It assigns sta y the client if such losses are due to circu	Xenco, its aff	ompany to	m client c	chase order from	tutes a valid pur	of samples consti	nd relinquishment or the cost of same	his document a	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcon 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
1631 / 245.1 / 7470 / 74/1 : Hg		Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U		Sb As Ba Be	11	TCLP / SPLP 6010: 8RCRA	TCLP / SPL	nalyzed	Circle Method(s) and Metal(s) to be analyzed	od(s) and M	Circle Meth
Na Sr TI Sn U V Zn	K Se Ag SiO	Cd Ca Cr Co Cu Fe Pb Mg		Sb As Ba		/ Texas 11	8RCRA 13PPM	8R(	200.8 / 6020:		Total 200.7 / 6010
				-		F					
			×	×	_	<u></u>	1500	01/18/2022	S	FS04	П
			×	×			1450	01/18/2022	S	FS01	П
			×	×			1445	01/18/2022	S	FS02	П
			×	×	1	<u></u>	1440	01/18/2022	S	FS03	TI
			×	×	<u> </u>	2	1045	01/18/2022	S	PH02A	₽
			×	×			1030	01/18/2022	S	PH02	q
			×	×	1	2'	1015	01/18/2022	S	PH01A	ld.
			×	×	1	-1	1000	01/18/2022	S	PH01	ם
Sample Comments			Chloric	TPH (E	Numb	Depth	Time Sampled	Date Sampled	Matrix	Sample Identification	Sample l
lab, if received by 4:30pm					er o		Total Containers:	Tota	Yes No N/A	<u> </u>	Sample Custody Seals
TAT starts the day recevied by the					Co	2.0.2	Correction Factor:	Corre	Yes No (NIA)		Cooler Custody Seals:
	ustody	890-1856 Chain of Custody	_		nta	עג	MU 00	-7m	(Yes) No		Received Intact:
					iner	ີ (	Thermometer ID		10/1.4		Temperature (°C):
					s	Yes No	Wet Ice: Yes	(Yes)No	Temp Blank:	CEIPT	SAMPLE RECEIPT
API: 30-015-40710						ate:	Due Date		astro	Alexis Castro	Sampler's Name:
CC: 1081221001							Rush:				P.O. Number:
INC: nAPP2132248577						ie	Routine	Task #: 06.02	31403236.029	31	Project Number:
Work Order Notes		ANALYSIS REQUEST				Turn Around	Tui	123	PLU #423		Project Name:
ADaPT Other:	Deliverables: EDD	Email: Alexis.Castro@wsp.com; Benjamin.Bellil@wsp.com	enjamin.B	o.com; B	o@wsi	Alexis.Castr	Email:		3849	432.236.3849	Phone:
Level III PST/UST L'RRP LLevel IV	Reporting:Level II Level III PS	Rep	Carlsbad, NM 88220	Carlsbad,		City, State ZIP		i	Midland, TX 79705	Midland,	City, State ZIP:
	State of Project:	σ	3104 E Green Street	3104 E G		Address:			3300 North A Street	3300 No	Address:

Work Order No:

Phone: 575-988-3199 Fax: 575-988-3199

**Eurofins Carlsbad** 

Carlsbad, NM 88220 1089 N Canal St.

13

# Chain of Custody Record

🖏 eurofins

**Environment Testing** 

State Zip: TX 79701 Midland Project Name PLU #423 1211 W Florida Ave Vote: Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody if the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC altertions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central LLC. PH02A (890-1856-4) PH02 (890-1856-3) PH01A (890-1856-2) PH01 (890-1856-1) Eurofins Environment Testing South Centre FS04 (890-1856-8) FS01 (890-1856-7) FS03 (890-1856-5) Sample Identification - Client ID (Lab ID) 132-704-5440(Tel) Shipping/Receiving <sup>-</sup>S02 (890-1856-6) elinquished by ossible Hazard Identification lient Information (Sub Contract Lab) ent Contact: eliverable Requested I, II III IV Other (specify) npty Kit Relinquished by ∆ No Custody Seal No Project #: 89000004 Due Date Requested 1/27/2022 Sample Date/Time Primary Deliverable Rank. 2 AT Requested (days) 1/18/22 1/18/22 1/18/22 1/18/22 1/18/22 1/18/22 1/18/22 1/18/22 Mountain 14 40 Mountain 14 50 Mountain 14 45 Mountain 10 45 Mountain 10 30 Mountain 10 15 Mountair Mountair 15 00 Sample Time 10 00 (C=Comp G=grab) Sample Preservation Code: Company Company Company Matrix Solid Solid Solid Solid Solid Solid Solid Solid essica kramer@eurofinset.com Kramer, Jessica Field Filtered Sample (Yes or No) Ime Accreditations Required (See note). NELAP - Louisiana NELAP - Texas Special Instructions/QC Requirements Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Perform MS/MSD (Yes or No) 8015MOD\_NM/8015NM\_S\_Prep (MOD) Full TPH Received by × × × × × Cooler Temperature(s) °C and Other Remarks Received by × × × Return To Client × × 8015MOD Calc  $\times$ × × × × × × × × 300\_ORGFM\_28D/DI\_LEACH Chloride × × × × × × 8021B/5035FP\_Calc (MOD) BTEX × × × Analysis Requested × × × × Total\_BTEX\_GCV × 0 Disposal By Lab State of Origin
New Mexico 2 Date/Time <u>て</u> Archive For Total Number of containers 2005. 4 į<del>iši</del>, -A HCL

B NaOH

C Zn Acetate

D Nitric Acid

E NaHSO4

F MeOH

G Amchior

H Ascorbic Acid

J- Ibe

J DI Water

K EDTA

L EDA Page 1 of 1 COC No: 890-597 1 890-1856-1 NaOH HCL H T T O Special Instructions/Note: A Hexane

Value

Value Company Company Ver: 06/08/2021 8

# **Login Sample Receipt Checklist**

Client: WSP USA Inc. Job Number: 890-1856-1

SDG Number: 31403236.029 TASK #06.02

List Source: Eurofins Carlsbad

Login Number: 1856 List Number: 1 Creator: Clifton, Cloe

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: 890-1856-1

SDG Number: 31403236.029 TASK #06.02

List Source: Eurofins Midland

List Creation: 01/25/22 11:57 AM

Creator: Rodriguez, Leticia

Login Number: 1856

List Number: 2

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

Euronnis Cansbau

Released to Imaging: 2/16/2022 12:59:48 PM

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13

14

<6mm (1/4").

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

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 80926

#### **CONDITIONS**

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	80926
Γ.	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved. Please implement 19.15.29.13 when P&A site.	2/16/2022