District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural **Resources Department** 

**Oil Conservation Division** 1220 South St. Francis Dr. Santa Fe, NM 87505

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Revised August 24, 2018 Submit to appropriate OCD District office

)

Incident ID	NAPP2036552621
District RP	
Facility ID	
Application ID	

## **Release Notification**

#### **Responsible Party**

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

#### **Location of Release Source**

32.13109 Latitude

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

-103.92776

Site Name Brushy Draw 161H	Site Type wellhead
Date Release Discovered 12/19/2020	API# (if applicable)

Unit Letter	Section	Township	Range	County
Е	18	258	30E	Eddy

Surface Owner: State X Federal Tribal Private (Name: \_

#### **Nature and Volume of Release**

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

🗙 Crude Oil	Volume Released (bbls) .3	Volume Recovered (bbls) .2
X Produced Water	Volume Released (bbls) 5.7	Volume Recovered (bbls) 3.8
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	Yes No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
🗌 Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release LO for dispate	Ind a 4" 90* washed out on water dump side of tester seched and recovered standing fluid. A third-party has bee	parator from internal corrosion. Vacuum truck was n retained for remediation activities.

Page	2
1 age	~

NA

#### Oil Conservation Division

Incident ID	NAPP2036552621
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Application ID	

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

#### **Initial Response**

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

 $\checkmark$  The source of the release has been stopped.

It impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have <u>not</u> been undertaken, explain why:

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

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

Printed Name: Kyle Littrell	Title:
Signature: Ge Authort	Date:
email: Kyle_Littrell@xtoenergy.com	Telephone:
OCD Only	
Received by: Ramona Marcus	Date:

CONDITIONS

Action 23588

District | 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District || 811 S. First St. Artesia NM 88210

 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

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170 District IV

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

#### CONDITIONS OF APPROVAL

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Building #5 Midland, TX79707	OGRID: 5380	Action Number: 23588	Action Type: C-141
OCD Reviewer	Condition	·	
rmarcus	None		

Received by OCD: 6/16/2021 8:51:52 AM State of New Mexico

**Oil Conservation Division** 

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Incident ID	nAPP2036552621
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## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas <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. Field data

Page 3

- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within <sup>1</sup>/<sub>2</sub>-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- X Topographic/Aerial maps
- Laboratory data including chain of custody

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

Received by OCD: 6/16/2021	8:51:52 AM State of New Mexico		_		Page 5 of 17
				Incident ID	nAPP2036552621
Page 4	Oil Conservation Division	n		District RP	
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				Application ID	
regulations all operators are re public health or the environme failed to adequately investigate addition, OCD acceptance of a and/or regulations. Printed Name:	action given above is true and complete to the quired to report and/or file certain release n ent. The acceptance of a C-141 report by the e and remediate contamination that pose a the C-141 report does not relieve the operator <u>Kyle Littrell</u> <u>Machannel Com</u> <u>I@exxonmobil.com</u>	otifications a e OCD does hreat to groun of responsib 	nd perform corn not relieve the c ndwater, surface lity for complia <u>Environm</u> 06/16/2021	ective actions for rele operator of liability sho water, human health nce with any other fea ental Manager	eases which may endanger ould their operations have or the environment. In deral, state, or local laws
OCD Only Received by:		]	Date:		

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Oil Conservation Division

Incident ID	nAPP2036552621
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Facility ID	
Application ID	

## Closure

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

<b><u>Closure Report Attachment Checklist</u></b> : Each of the following a	items must be include	d in the closure report.	
$\square$ A scaled site and sampling diagram as described in 19.15.29.	A scaled site and sampling diagram as described in 19.15.29.11 NMAC		
Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	of the liner integrity	if applicable (Note: appropriate OCD District office	
Laboratory analyses of final sampling (Note: appropriate OD	C District office must	be notified 2 days prior to final sampling)	
Description of remediation activities			
I hereby certify that the information given above is true and complete and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and re- human health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regular restore, reclaim, and re-vegetate the impacted surface area to the co- accordance with 19.15.29.13 NMAC including notification to the O	n release notifications a C-141 report by the mediate contamination a C-141 report does n ations. The responsib nditions that existed p	and perform corrective actions for releases which oCD does not relieve the operator of liability that pose a threat to groundwater, surface water, ot relieve the operator of responsibility for le party acknowledges they must substantially prior to the release or their final land use in	
Printed Name: Kyle Littrell	Title:	Environmental Manager	
Printed Name: Kyle Littrell Signature: Gal Administration	Date:06/16/	2021	
email:Kyle_Littrell@exxonmobil.com	Telephone:	432-221-7331	
OCD Only			
Received by:	Date:		
Closure approval by the OCD does not relieve the responsible party remediate contamination that poses a threat to groundwater, surface party of compliance with any other federal, state, or local laws and	water, human health,		
Closure Approved by:	Date:		
Printed Name:	Title:		

District I 1625 N, French Dr., Hobbs, NM 88240 District II 811 S, First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S, St. Francis Dr., Santa Fe, NM 87505 State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

1

Incident ID	nAPP2102246632
District RP	
Facility ID	
Application ID	

## **Release Notification**

#### **Responsible Party**

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

#### Location of Release Source

Longitude	-103.92762
(NAD 83 in decimal degrees to 5 decim	nal places)

Site Name PLU 18 BD CTB/161H	Site Type CTB
Date Release Discovered 1-18-2021	API# (if applicable)

Unit Letter	Section	Township	Range	County
Е	18	25S	30E	Eddy

Surface Owner: State X Federal Tribal Private (Name: \_\_\_\_\_

#### Nature and Volume of Release

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

Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
Produced Water	Volume Released (bbls) 14.84	Volume Recovered (bbls) 8.0
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	Yes No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
🗌 Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release	enorted a PW release from a 4" T connection unstream o	f the 161H water line manifold tie-in from internal

LO reported a PW release from a 4" T connection upstream of the 161H water line manifold tie-in from internal corrosion. A third-party contractor has been retained for remediation activities.

#### Received by OCD: 6/16/2021 8:51:52 AM

E C 141	State - ENI Manie -		
Form C-141	State of New Mexico	Incident ID	nAPP2102246632
Page 2	Oil Conservation Division	District RP	
		Facility ID	
		Application ID	

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

#### **Initial Response**

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

 $\mathbf{X}$  The source of the release has been stopped.

It impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

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

NA

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

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

Printed Name: Kyle Littrell	Title:
Signature: Actived	Date:
email: kyle.littrell@exxonmobil.com	Telephone:
OCD Only	
Received by:	Date:

Received by OCD: 6/16/2021 8:51:52 AM State of New Mexico

**Oil Conservation Division** 

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## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas <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. Field data

Page 3

- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within <sup>1</sup>/<sub>2</sub>-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- X Topographic/Aerial maps
- Laboratory data including chain of custody

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

Received by OCD: 6/16/2	021 8:51:52 AM State of New Mexic	0		Page 10 of 1			
			Incident ID	nAPP2102246632			
Page 4	Oil Conservation Divis	sion	District RP				
			Facility ID				
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regulations all operators are public health or the environ failed to adequately investi addition, OCD acceptance and/or regulations. Printed Name:	ormation given above is true and complete e required to report and/or file certain releas ment. The acceptance of a C-141 report by gate and remediate contamination that pose of a C-141 report does not relieve the opera <u>Kyle Littrell</u> <u>Mach</u> trell@exxonmobil.com	se notifications and per- y the OCD does not reli a threat to groundwate ator of responsibility for Title:E Date: <u>06/</u>	form corrective actions for eve the operator of liability r, surface water, human hea	releases which may endanger y should their operations have alth or the environment. In r federal, state, or local laws			
OCD Only Received by:		Date:					

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Incident ID	nAPP2102246632
District RP	
Facility ID	
Application ID	

## Closure

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

<b><u>Closure Report Attachment Checklist</u>:</b> Each of the following it	ems must be included in the closure report.					
A scaled site and sampling diagram as described in 19.15.29.1	1 NMAC					
Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)					
Laboratory analyses of final sampling (Note: appropriate ODC	District office must be notified 2 days prior to final sampling)					
Description of remediation activities						
and regulations all operators are required to report and/or file certair may endanger public health or the environment. The acceptance of	A c-141 report does not relieve the operator of responsibility for tions. The responsible party acknowledges they must substantially additions that existed prior to the release or their final land use in					
Printed Name: Kyle Littrell	Title:Environmental Manager					
Printed Name: Kyle Littrell Signature:	Date:06/16/2021					
email:Kyle_Littrell@exxonmobil.com						
OCD Only						
Received by: Chad Hensley	Date: 07/13/2021					
	of liability should their operations have failed to adequately investigate and vater, human health, or the environment nor does not relieve the responsible or regulations.					
Closure Approved by:	Date: 07/13/2021					
Printed Name: Chad Hensley	Title: Environmental Specialist Advanced					

WSP USA

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

June 15, 2021

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

#### RE: Closure Request PLU 18 Brushy Draw CTB/161H Incident Numbers nAPP2036552621 and nAPP2102246632 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) 18 Brushy Draw CTB/161H (Site) in Unit E, Section 18, 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 two overlapping releases of crude oil and produced water at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this Closure Request and requesting no further action (NFA) for Incident Numbers nAPP2036552621 and nAPP2102246632.

#### **RELEASE BACKGROUND**

#### Incident Number nAPP2036552621

On December 19, 2020, internal corrosion on the test separator resulted in the release of approximately 0.3 barrels (bbls) of crude oil and 5.7 bbls of produced water onto the surface of the well pad. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 0.2 bbls of crude oil and 3.8 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on December 29, 2020 and was assigned Incident Number nAPP2036552621.

#### Incident Number nAPP2102246632

On January 18, 2021, internal corrosion of a connection upstream of a water line manifold tie-in resulted in the release of approximately 14.84 bbls of produced water onto the surface of the well pad. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 8.0 bbls of produced water were recovered. XTO reported the release to the

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NMOCD on a Form C-141 on January 22, 2021 and was assigned Incident Number nAPP2102246632.

#### 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. During January 2021, WSP installed a soil boring (C-4529) within 0.5 miles of the Site utilizing a truck-mounted hollow-stem auger rig. Soil boring C-4529 was drilled to a depth of 101 feet bgs. A WSP geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activities. The Well Record and Log is included in Attachment 1. The location of the borehole is on Site in the northwest corner of the pad (approximately 0.02 miles northwest of the release extent) 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 100 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 ephemeral, intermittent riverine located approximately 3,884 feet northeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is 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

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District II Page 3

#### SITE ASSESSMENT AND SOIL SAMPLING ACTIVITIES

On February 11, 2021, WSP personnel visited the Site to evaluate the release extents based on information provided on the Form C-141s and visual observations. The releases occurred in an area of active process equipment with limited access. The release extents from the two release events overlapped and were evaluated simultaneously. WSP personnel collected five preliminary assessment soil samples (SS01 through SS05) within the release extent from a depth of approximately 0.5 feet bgs to assess the lateral extent of impacted soil. The preliminary soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach<sup>®</sup> chloride QuanTab<sup>®</sup> 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 Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for preliminary soil samples SS01, SS02, SS04, and SS05 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 SS03 indicated that TPH-GRO/TPH-DRO concentrations equaled the Closure Criteria. Based on the laboratory analytical results, further evaluation of the release extent and excavation in the area around sample SS03 was warranted.

#### DELINEATION SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

During March and June 2021, WSP personnel returned to the Site to oversee additional site assessment activities. Twelve potholes (PH01 through PH12) were advanced using a track-mounted backhoe to a depth of 2 feet bgs to confirm the absence of impacted soil. Potholes PH02, PH06, PH08, and PH09 were advanced within the release extent in accessible locations of the active process equipment area. Potholes PH01, PH03 through PH05, PH07, and PH10 through PH12 were advanced in locations surrounding the release extent and active process equipment. Delineation soil samples were collected from each pothole from depths of 1-foot and 2 feet bgs. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride as described above. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 2. The location of potholes PH01 through PH12 are presented on Figure 3. The delineation soil samples were collected, handled,

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District II Page 4

and analyzed as described above at Eurofins in Midland, Texas. Photographic documentation of the Site visits is included in Attachment 3.

Laboratory analytical results for the delineation soil samples collected from potholes PH01 through PH12 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and confirmed the absence of any additional impacted soil.

#### **EXCAVATION SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS**

On March 17, 2021, in coordination with delineation activities, WSP personnel were at the Site to oversee excavation activities as indicated by visual observations, field screening activities, and laboratory analytical results for preliminary soil sample SS03. To direct excavation activities, WSP screened soil for volatile aromatic hydrocarbons and chloride as described above. Photographic documentation is included in Attachment 3.

Following removal of impacted soil, WSP collected 5-point composite soil samples every 200 square feet from the sidewalls and 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 SW01 through SW04 were collected from the sidewalls of the excavation from depths ranging from the ground surface to 2 feet bgs. Composite soil samples FS01 through FS05 were collected from the floor of the excavation from a depth of approximately 2 feet bgs. The excavation soil samples were collected, handled, and analyzed following the same procedures as described above.

The excavation area measured approximately 641 square feet. A total of approximately 47 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 Orla, Texas. After completion of confirmation sampling, the excavation area was backfilled.

Laboratory analytical results for all excavation soil samples (SW01 through SW04 and FS01 through FS05) indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. The final excavation extent and excavation soil sample locations are presented on Figure 4. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

#### **CLOSURE REQUEST**

Site assessment and excavation activities were conducted at the Site to address the December 29, 2020 and January 18, 2021 releases of crude oil and produced water. Laboratory analytical results for the delineation and excavation soil samples indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based

wsp

District II Page 5

on the soil sample analytical results, no further remediation was required. The excavation was backfilled with material purchased locally and recontoured to match pre-existing site conditions.

Initial response efforts, which included removal of freestanding fluids via hydrovac and excavation of impacted soil have mitigated impacts at this Site. Based on initial response efforts, soil sample laboratory analytical results compliant with the Closure Criteria, and confirmed depth to groundwater greater than 100 feet bgs, XTO respectfully requests NFA for Incident Numbers nAPP2036552621 and nAPP2102246632.

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

Sincerely,

WSP USA Inc.

anna Byers

Anna Byers Consultant, Geologist

Ashley L. ager

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

cc: Kyle Littrell, 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 1Soil Analytical Results
- Attachment 1 Well Record and Log
- Attachment 2 Lithologic/Sampling Log
- Attachment 3 Photographic Log
- Attachment 4 Laboratory Analytical Reports

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## FIGURE

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P:XTO Energy\GIS\MXD\012921019\_PLU 18 BRUSHY DRAW CTB 161H\012921019\_FIG01\_SL\_RECEPTOR\_2021\_1.mxd





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# TABLES

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#### Table 1

#### Soil Analytical Results PLU 18 Brushy Draw CTB/161H Incident Numbers nAPP2036552621 and nAPP2102246632 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 Cl	osure Criteria (NM	AC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
Surface Samples	Inface Samples									
SS01	02/11/2021	0.5	< 0.00200	< 0.00200	<50.2	<50.2	<50.2	<49.9	<50.2	15,300
SS02	02/11/2021	0.5	< 0.00199	< 0.00199	<50.2	<50.2	<50.2	<49.8	<50.2	17,600
SS03	02/11/2021	0.5	< 0.00202	< 0.00202	<50.2	1,000	90.8	1,000	1,090	7,080
SS04	02/11/2021	0.5	< 0.00202	< 0.00202	<50.0	<50.0	<50.0	<49.9	<50.0	7,940
SS05	02/11/2021	0.5	< 0.00200	< 0.00200	<50.3	<50.3	<50.3	<50.0	<50.3	15,100
Delineation Samples	;									
PH01	03/16/2021	1	< 0.00200	< 0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	38.2
PH01A	03/16/2021	2	< 0.00199	< 0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	15.4
PH02	03/16/2021	1	< 0.00199	< 0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	6.31
PH02A	03/16/2021	2	< 0.00200	< 0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	9.87
PH03	03/16/2021	1	< 0.00198	< 0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	21.6
PH03A	03/16/2021	2	< 0.00201	< 0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	281
PH04	03/16/2021	1	< 0.00201	< 0.00201	<49.8	<49.8	<49.8	<49.8	<49.8	21.0
PH04A	03/16/2021	2	< 0.00200	< 0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	5.41
PH05	03/16/2021	1	< 0.00200	< 0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	14.3
PH05A	03/16/2021	2	< 0.00200	< 0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	6.38
PH06	03/16/2021	1	< 0.00202	< 0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	1,640
PH06A	03/16/2021	2	< 0.00201	< 0.00201	<49.7	<49.7	<49.7	<49.7	<49.7	319

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#### Table 1

#### Soil Analytical Results PLU 18 Brushy Draw CTB/161H Incident Numbers nAPP2036552621 and nAPP2102246632 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 Cl	osure Criteria (NM	AC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
PH07	03/16/2021	1	< 0.00199	< 0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	12.4
PH07A	03/16/2021	2	< 0.00199	< 0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	6.95
PH08	03/17/2021	1	< 0.00199	< 0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	1,350
PH08A	03/17/2021	2	< 0.00198	< 0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	2,140
PH09	03/17/2021	1	< 0.00200	< 0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	198
PH09A	03/17/2021	2	< 0.00200	< 0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	285
PH10	06/11/2021	1	< 0.00200	< 0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	124
PH10A	06/11/2021	2	< 0.00199	< 0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	37.5
PH11	06/11/2021	1	< 0.00200	< 0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	73.7
PH11A	06/11/2021	2	< 0.00202	< 0.00403	<49.7	<49.7	<49.7	<49.7	<49.7	<4.98
PH12	06/11/2021	1	<0.00198	< 0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	<5.05
PH12A	06/11/2021	2	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	<5.05
Excavation Floor Sa	Excavation Floor Samples									
FS01	03/17/2021	2	< 0.00200	< 0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	44.4
FS02	03/17/2021	2	< 0.00200	< 0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	27.3
FS03	03/17/2021	2	<0.00198	< 0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	4,010
FS04	03/17/2021	2	< 0.00201	< 0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	24.3
FS05	03/17/2021	2	< 0.00199	< 0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	95.5

#### Table 1

#### Soil Analytical Results PLU 18 Brushy Draw CTB/161H Incident Numbers nAPP2036552621 and nAPP2102246632 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 Clo	NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			50	NE	NE	NE	1,000	2,500	20,000
Excavation Sidewall	Excavation Sidewall Samples									
SW01	03/17/2021	0 - 2	< 0.00200	< 0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	512
SW02	03/17/2021	0 - 2	< 0.00198	< 0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	613
SW03	03/17/2021	0 - 2	< 0.00201	< 0.00201	<49.8	<49.8	<49.8	<49.8	<49.8	684
SW04	03/17/2021	0 - 2	< 0.00200	< 0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	1,170

ft - feet/foot

mg/kg - milligrams per kilograms

BTEX - benzene, toluene, ethylbenzene, and total xylenes

TPH - total petroleum hydrocarbons

DRO - diesel range organics

GRO - gasoline range organics

ORO - motor oil range organics

NMOCD - New Mexico Oil Conservation Division

NMAC - New Mexico Administrative Code

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

NE - Not Established

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

Text impacted soil was removed

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



06/09/2021

**DII-NMOSE** 1900 W 2<sup>nd</sup> Street Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record C-4529 Pod1

To whom it may concern:

Attached please find a well record and a plugging record, in duplicate, for a one (1) soil borings, C-4529 Pod1.

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

Sincerely,

Guoon Middle

Lucas Middleton

Enclosures: as noted above



## PLUGGING RECORD



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

#### I. GENERAL / WELL OWNERSHIP:

State	Engineer Well Number: C-	4529-POD1			400.000.0070
Well	owner: XTO ENERGY (Ky			Phone No.:	432.682.8873
Maili	ing address: 6401 Holiday H	Hill Dr.			
City:	Midland		State:	Texas	Zip code:
<u>II. V</u>	VELL PLUGGING INFO	RMATION:			
1)	Name of well drilling co	ompany that plugged w	/eil: Jackie D.	Atkins ( Atkins Engine	ering Associates Inc.)
2)	New Mexico Well Drill	er License No.:		E	Expiration Date:
3)	Well plugging activities Shane Eldridge, Carme			ll driller(s)/rig supervi	isor(s):
4)	Date well plugging bega	an: 06/08/2021	Date	e well plugging conclu	ided: 06/08/2021
5)	GPS Well Location:	Latitude: <u>32</u> Longitude: <u>10</u>			.07 sec 2.27 sec, WGS 84
6)	Depth of well confirmed by the following manne		ng as:101	ft below ground lo	evel (bgl),
7)	Static water level measu	ured at initiation of plug	gging:n/a	ft bgl	
8)	Date well plugging plan	of operations was app	roved by the S	ate Engineer:04/22	/2021
9)	Were all plugging activi differences between the	ities consistent with an approved plugging pla	approved plug in and the well	ging plan? Yes as it was plugged (atta	If not, please describe ach additional pages as needed):
					11 Mil 14 11 11 11 11 11 11 11 11 11
1					3-117 - N.J. 2021-96 - J

Version: September 8, 2009 Page 1 of 2 10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

<u>Depth</u> (ft bgl)	Plugging <u>Material Used</u> (include any additives used)	Volume of <u>Material Placed</u> (gallons)	<u>Theoretical Volume</u> of Borehole/ Casing (gallons)	Placement <u>Method</u> (tremie pipe, other)	<u>Comments</u> ("casing perforated first", "open annular space also plugged", etc.)
-	0-10' Hydrated Bentonite	Approx. 20.8 gallons	15.9 gallons	Augers	
	10'-101' Drill Cuttings	Approx. 145 gallons	145 gallons	Boring	
-					
-					
,			BY AND OBTAIN		FIN 10 2021 av2 110
		cubic feet x 7.4 cubic yards x 201.9	805 = gallons 97 = gallons		na na na ha na ha na na ha

#### For each interval plugged, describe within the following columns:

#### III. SIGNATURE:

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

Jack Atkins

06/09/2021 Date

Signature of Well Driller

Version: September 8, 2009 Page 2 of 2

# 2021-06-07\_C-4529\_POD1\_OSE\_Well Record and Log\_161-forsign

**Final Audit Report** 

2021-06-09

Created:	2021-06-09
Ву:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAx3vgpa2DXHruqslc_wdMXM5SCxHD9Hee

## "2021-06-07\_C-4529\_POD1\_OSE\_Well Record and Log\_161-for sign" History

- Document created by Lucas Middleton (lucas@atkinseng.com) 2021-06-09 - 5:46:38 PM GMT- IP address: 69.21.248.123
- Document emailed to Jack Atkins (jack@atkinseng.com) for signature 2021-06-09 - 5:47:16 PM GMT
- Email viewed by Jack Atkins (jack@atkinseng.com) 2021-06-09 - 6:46:34 PM GMT- IP address: 64.90.153.232
- Document e-signed by Jack Atkins (jack@atkinseng.com) Signature Date: 2021-06-09 - 6:47:32 PM GMT - Time Source: server- IP address: 64.90.153.232
- Agreement completed. 2021-06-09 - 6:47:32 PM GMT

30101 JUN = 2021 PM2 100





## WELL RECORD & LOG

### OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

	OSE POD NO.		0.)		WELL TAG ID NO.			OSE FILE NO(	S).		
NOL	POD1 (M				n/a			C-4529			
DCAT	WELL OWNE XTO Energ	-						PHONE (OPTI	ONAL)		
VELL LO	WELL OWNE 6401 Holid							CITY Midland		state TX 79707	ZIP
GENERAL AND WELL LOCATION	WELL LOCATION (FROM GP:	5)	ATITUDE	GREES 32° 103°	MINUTES 8' 55'	SECOND 2.07 42.27	N		REQUIRED: ONE TEN QUIRED: WGS 84	TH OF A SECOND	
1. GENH	DESCRIPTION NW NW Se	IN RELATI	NG WELL LOCATION TO	STREET ADD	RESS AND COMMON	I LANDMAR	RKS – PLS	S (SECTION, TO	WNSHJIP, RANGE) WH	ERE AVAILABLE	
i i	LICENSE NO. 124		NAME OF LICENSED		Jackie D. Atkins				NAME OF WELL DR Atkins Eng	ILLING COMPANY gineering Associates,	Inc.
	DRILLING ST 05/14/2		DRILLING ENDED 05/14/2021		MPLETED WELL (FI rary well materia			le depth (ft) 101	DEPTH WATER FIR:	ST ENCOUNTERED (FT n/a	)
7	COMPLETED	WELL IS:	artesian	T DRY HO	LE SHALLO	W (UNCON	FINED)		STATIC WATER LEV	/EL IN COMPLETED WI n/a	ELL (FT)
IOIL	DRILLING FL	UID:	AIR	MUD	ADDITIV	ES – SPECI	FY:				
RMA	DRILLING M	ETHOD:	ROTARY	HAMME	R CABLE T	OOL	🗸 отне	R - SPECIFY:	Hollo	w Stem Auger	
2. DRILLING & CASING INFORMATION	DEPTH (	(feet bgl) TO	BORE HOLE DIAM		MATERIAL AND GRADE			ASING NECTION	CASING INSIDE DIAM.	CASING WALL THICKNESS	SLOT SIZE
ASIN			(inches)		each casing string, sections of screen)		1	TYPE ling diameter)	(inches)	(inches)	(inches)
Se C	0	101	±6.5	-	Boring- HSA					-	
TING		-					-				
DRII		_						1			
4		-	-								
	DEPTH	fect bel)	BORE HOLE		IST ANNULAR SE		ERIAL	AND	AMOUNT	METHO	
IAL	FROM	то	DIAM. (inches)		VEL PACK SIZE-RANGE BY INTERVA				(cubic feet)		
TER											
ANNULAR MATERIAL		-									
NLA								_			
3. ANN											
43				1							
_	OSE INTER	NAL USI	B						0 WELL RECORD	& LOG (Version 06/3	30/17)
-	NO.				POD NO	).	1	TRN		DACE	1 OF 2
(LOC	ATION						- 10	WELL TAG I	DNO	I FAGE	

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	DEPTH (	feet bgl)									ESTIMATED
	FROM	то	THICKNESS (feet)	INCLUDE WATE	D TYPE OF MATERIAL E CR-BEARING CAVITIES C oplemental sheets to fully d	R FRAC	TURE ZONE	s	BEAF	TER UNG? / NO)	YIELD FOR WATER- BEARING ZONES (gpm)
	0	4	4	SAND, poorly graded	, fine-very grained, caliche	gravel, R	eddish-brown	ı, dry	Y	√ N	
. 1	4	29	25	CALICHE, poorly cor	nsolidated, with sand mediu	n grained	, tan-off whit	e, dry	Y	√ N	
	29	39	10	SAND, poorly graded,	fine-very grained, some ca	liche grav	el, Tan-brow	n, dry	Y	√ N	
	39	54	15	SILTY SAND, p	ooorly graded, very- fine gra	ined, Ligl	ht brown, dry		Y	√ N	
1	54	59	5	SILTY SAND, poorly	graded, very- fine grained, c	aliche gra	wel Light bro	wn, dr	Y	√ N	
Ţ	59	73	14	SANDY CLAY, very-f	fine grained sand, low plasti	city, Brow	vn- Red Brow	n, moi	Y	√ N	
4. HYDROGEOLOGIC LOG OF WELL	73	79	6	CLAYEY SAND, low	plasticity, very-fine grained	l sand, Br	own/Red Bro	wn, mc	Y	√ N	
OF	79	83	4	SANDY CLAY, very-1	fine grained sand, low plasti	city, Brov	vn- Dark Brow	wn, mo	Y	√ N	
00	83	94	9	SANDY CLAY, very-	-fine grained sand, low plast	icity, Red	ldish Brown,	moist	Y	√ N	
ICL	94	99	5	SANDY CLAY, very-1	fine grained sand, low plasti	city, Brov	vn-Dark Brov	vn, dry	Y	√ N	
Log	99	101	2	SANDY CLAY, ve	ry-fine grained sand, low pl	asticity, E	arth Brown, o	iry	Y	√ N	
EOI	1								Y	N	
ROG								1	Y	N	
IXD	1	1							Y	N	
4, I	1								Y	N	
		1							Y	N	
			1						Y	N	
		-				_			Y	N	
								-	Y	N	
			-						Y	N	
1.9		11					-		Y	N	
	METHOD U	SED TO ES	STIMATE YIELD	OF WATER-BEARING	G STRATA:				AL ESTIN		
	<b>PUM</b>	2 🗌 A		BAILER OT	HER - SPECIFY:			WEL	L YIELI	) (gpm):	0.00
NO	WELL TES	T TEST STAR	RESULTS - ATT T TIME, END TI	ACH A COPY OF DAT ME, AND A TABLE SH	A COLLECTED DURING IOWING DISCHARGE AN	WELL T	ESTING, ING VDOWN OV	CLUDI ER THI	NG DISC E TESTIN	HARGE I NG PERIC	METHOD, DD.
TEST; RIG SUPERVISION	MISCELLA	NEOUS INI	fe		als removed and the soil l ice, then hydrated benton P on-site geologist.						
TESI	PRINT NAM	fE(S) OF D	RILL RIG SUPE	VISOR(S) THAT PRO	VIDED ONSITE SUPERVI	SION OF	WELL CON	STRU	CTION O	THER TH	AN LICENSEE:
5. ]	Shane Eldri	ige, Carme	elo Trevino, Car	neron Pruitt							
SIGNATURE	CORRECT I	ECORD O	F THE ABOVE I	DESCRIBED HOLE AN	EST OF HIS OR HER KNO ID THAT HE OR SHE WII PLETION OF WELL DRIL	L FILE 1					
6. SIGN	Jack A	tkins		Jac	ckie D. Atkins		_		06/0	9/2021	
9		SIGNAT	URE OF DRILLI	R / PRINT SIGNEE	NAME					DATE	
FOR	R OSE INTER	NAL USE					WR-20 WE	LL RE	CORD &	LOG (Ve	rsion 06/30/2017)
	E NO.				POD NO.		TRN NO.				
LO	CATION					WELL	TAG ID NO.	-			PAGE 2 OF 2

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					WS	P USA			PH01	Date: 03/16/2021	
									o::		
				5	08 West S	Stevens S	Street		Site Name: Brushy Draw 1		00040000
				Car	Isbad, Ne		00220			nAPP2036552621 and nAPP210	02246632
									WSP Job Number: TE012		
				SIC / SOIL			G		Logged By: TC	Method: Excavator	
_at/Lor	ng: 32.133	3211, -103	3.92763	99	Field Scre				Hole Diame 2'	Total Depth: 2 feet bgs	
omm	onte: All c	bloride fie	ald scra	enings inclue	Hach chlo						
	st; D-dry; `			enings includ			actor				
	- ·, · <b>,</b> ,	<b>y</b> ,					$\prec$				
ut ∈	de (	r (	ng	e #	Sample	Donth	Soc				
Content	lori pr	Vapor (ppm)	Staining	Sample #	Depth	Depth	S/F mb		Litho	logy/Remarks	
N N	Chloride (ppm)	> q)	Sté	Sar	(ft bgs)	(ft bgs)	USCS/Rock Symbol				
				0,			Ö				
					4	0					
					-	-					
D	<168	0.6	Ν	PH01	1	1	SP	SAND, m	noist, tan, poorly grad	ed, fine-very fine grain, ab	oundant
								caliche o	ravel, poorly consolic	lated, white crusting, no or	dor
D	<168	0.3	Ν	PH01	2	2	SP	SAND, n	noist, tan, poorly grad	ed, fine-very fine grain, ab	bundant
								caliche g	ravel, poorly consolic	lated, white crusting, no or	dor

#### <u>Received by OCD: 6/16/2021 8:51:52 AM</u>

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eceive	ed by OC	D: 6/16	/2//21	8.51.52 /	M				-		Page 34
					WS	SP USA			PH02		Date: 03/16/2021
				E.	08 West	Stevens S	Street		Site Name: Brushy Draw	/ 161H	
				Car	Isbad, Ne	w Mexico	88220		RP or Incident Number:		
									WSP Job Number: TE01	2921007	
		LITH	OLOG	IC / SOIL	SAMPI	ING LO	G		Logged By: TC		Method: Excavator
Lat/Lo	ong: 32.133				Field Scre				Hole Diame 2'		Total Depth: 2 feet bgs
	-				Hach chlo	oride strips,					· · · ·
	nents: All c ist; D-dry; `			enings includ	le a 40% c	orrection fa	actor				
101-1110	ы, <b>D-</b> ury,	- yes, IN-	U				×	r			
nt	) de	5	br	#	Sample		loc				
Moisture Content	lori( pm	Vapor (ppm)	Staining	nple	Depth	Depth	S/F mb		Lith	ology/Re	emarks
δNo	Chloride (ppm)	у С	Sta	Sample #	(ft bgs)	(ft bgs)	USCS/Rock Symbol				
		ļ		.,		0	Ď				
					1	0					
						Ĺ					
	460	0.5	NI		4	- 1	00	CAND	alat tan narther	dod fire	a yong fina arain akundart
D	<168	0.5	Ν	PH02	1	1	SP				e-very fine grain, abundant white crusting, no odor
D	<168	0.1	Ν	PH02	2	2	SP	SAND, r	noist, tan, poorly gra	ded, fine	e-very fine grain, abundant
											white crusting, no odor
		1						1			
				·							

#### <u>Received by OCD: 6/16/2021 8:51:52 AM</u>

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					WS	P USA			PH03		Date: 03/16/2021	
				5	08 West	Stevens S	Street		Site Name: Brushy Draw	v 161H		
				Car	lsbad, Ne	w Mexico	88220		RP or Incident Number:			
									WSP Job Number: TE0			
				IC / SOIL			G		Logged By: TC		Method:Excavator	
at/Loi	ng: 32.133	3211, -103	3.92763	9	Field Scre Hach chlo		חוס		Hole Diame 2'		Total Depth: 2 feet bgs	
omm	ents: All c	hloride fie	ld scre	enings includ								
	st; D-dry; `			Ū								
	d)		g	#			ock I					
ten	m)	por m)	nin	ple	Sample Depth	Depth	/Rc lbo		Lith	ology/Re	marks	
Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	(ft bgs)	(ft bgs)	USCS/Rock Symbol			51599/110		
	0		57	S	( - 3-)		n n					
						0						
	.400	0.0	K I	DUICO			05	CAND	and the set of	ala d. C	the second s	
D	<168	0.3	Ν	PH03	1	1	SP				e-very fine grain, abundant white crusting, no odor	
D	<168	375.2	Ν	PH03	2	2	SP	SAND, n	noist, tan, poorly gra	aded, fine	e-very fine grain, abundant	
								caliche g	ravel, poorly consol	lidated, v	vhite crusting, no odor	
	<u> </u>			<u>8.51.52</u> A					PH04		Date: 03/16/2021	age 3
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					WS	SP USA						
				5	08 West	Stevens S	Street		Site Name: Brushy Draw	/ 161H		
				Car	isbad, Ne	w Mexico	88220		RP or Incident Number:	00010		
		1.1999.0			0.4.1.2.5.		_		WSP Job Number: TE01			
. //	00.400			IC / SOIL			G		Logged By: TC		Method: Excavator	
at/Lo	ng: 32.133	3211, -103	3.92763	9	Field Scre	ening: ride strips,	PID		Hole Diame 2'		Total Depth: 2 feet bgs	
omm	ents: All c	hloride fie	ld scre	enings includ								
I-moi	st; D-dry; `	Y-yes; N-r	าด		-			1				
Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	(ft bgs)	USCS/Rock Symbol		Lith	ology/Re	emarks	
D D	<168 <168	0.3 0.3	N	PH04 PH04	1 1 2	0	SP SP	<u>caliche g</u> SAND, r	gravel, poorly consoli noist, tan, poorly gra	idated, v ded, fine	e-very fine grain, abundai white crusting, no odor e-very fine grain, abundai white crusting, no odor	
											$\searrow$	

eceive	ed by OC	'D: 6/16	/2021	8:51:52 /					-		Pag	<u>7e 38</u>
					WS	SP USA			PH05		Date: 03/15/2021	
				F	08 West	Stevens S	Street		Site Name: Brushy Draw	161H		
				Car	Isbad, Ne	w Mexico	88220		RP or Incident Number:			
									WSP Job Number: TE012	2921007		
		LITH	OLOG	SIC / SOIL	SAMPL	ING LO	G		Logged By: TC		Method: Excavator	
Lat/Lo	ong: 32.133	3211, -10	3.92763	39	Field Scre	ening:			Hole Diame 2'		Total Depth: 2 feet bgs	
						oride strips						
	nents: All c ist; D-dry; `			enings inclue	le a 40% c	correction f	actor					
IVI IIIO	iot, D ury,	1 900, 14				I	×	I				
ure	Chloride (ppm)	5 🕤	ng	Sample #	Sample	Depth	USCS/Rock Symbol					
Moisture Content	opm	Vapor (ppm)	Staining	Idu	Depth	(ft bgs)	/S/F		Litho	ology/Re	emarks	
ŏЧ	Ч Ц	$> \exists$	St	Saı	(ft bgs)	(11 by3)	S) S)					
						0						
					1							
						t						
_		_				L .						-
D	<168	0.8	Ν	PH05	1	1	SP				e-very fine grain, abundant	
D	<168	0.1	Ν	PH05	2	2	SP	SAND n	noist tan poorly consoli	ded fine	vhite crusting, no odor e-very fine grain, abundant	Ē
	100	0.1		11100	-	_	0.				white crusting, no odor	
												-
$\vdash$	l	I										
							TD (	🦻 2 ft bgs				
	$\mathbf{i}$											
		$\overline{}$										
			$\mathbf{i}$									
					$\mathbf{i}$							
						$\overline{}$						
							$\overline{}$					
									$\mathbf{i}$			
										$\mathbf{i}$		
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											$\mathbf{i}$	
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_			1 20 80 20 2	8.51.52 /							Page
					WS	SP USA			PH06		Date: 03/16/2021
				F	08 West	Stevens S	Street		Site Name: Brushy Draw	161H	
				Car	Isbad, Ne	w Mexico	88220		RP or Incident Number:		
									WSP Job Number: TE012	2921007	
		LITH	OLOG	IC / SOIL	. SAMPL	ING LO	G		Logged By: TC		Method:Excavator
Lat/Lo	ong: 32.133	3211, -103	3.92763	9	Field Scre	ening:			Hole Diame 2'	,	Total Depth: 2 feet bgs
						oride strips,					
	nents: All c ist; D-dry; `			enings includ	le a 40% c	orrection fa	actor				
WI-IIIO	ist, D-ury,	I-yes, N-					~	<u> </u>			
nt re	) de		br	#	Sample		lo ol				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth	Depth	S/F mb		Litho	ology/Re	emarks
ΩΩ	сh р	⇒ J	Sta	Sar	(ft bgs)	(ft bgs)	USCS/Rock Symbol				
							n				
						0					
						-					
				_						-	
D	2,604	4.7	Ν	PH06	1	1	SP				e-very fine grain, abundant
D	510	0.7	Ν	PH06	2	2	SP		ravel, poorly consolid	dated, V	vhite crusting, no odor e-very fine grain, abundant
	510	0.1	IN	11100	-	-	01				white crusting, no odor
								Ň		,	<u>.</u>

					WS	P USA			PH07	I	Date: 03/15/2021
							24		Sito Nama: Bruchu Door	v 161⊔	
				5 Car	08 West S Isbad, Ne	stevens S w Mexico	Street 0 88220		Site Name: Brushy Drav RP or Incident Number:	HIOIN	
				- Cal					WSP Job Number: TE0	12921007	
		LITH		GIC / SOIL	SAMPI	INGLO	G		Logged By: TC	1	Method: Excavator
at/Lo	ng: 32.133				Field Scre		-		Hole Diame 2'		Total Depth: 2 feet bgs
					Hach chlo	ride strips,					
	ents: All c st; D-dry; `			enings includ	le a 40% c	orrection fa	actor				
t i	Φ		g	#	Sample		USCS/Rock Symbol				
Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Donth	Depth	S/R nbc		Lith	nology/Re	emarks
CO CO	Chl (p	Va P	Sta	San	(ft bgs)	(ft bgs)	SC			0,	
				0,			Ő				
						0					
						-					
D	<168	0.2	Ν	PH07	1	1	SP				-very fine grain, abundant
D	<168	0.0	Ν	PH07	2	2	SP	SAND n	pravel, poorly conso	ndated, w	hite crusting, no odor -very fine grain, abundant
	100	0.0		11107	2	-	01				hite crusting, no odor
<								@ 2 ft bgs			

					WS	P USA			PH08	Dat	e: 03/17/2021
							Charact		Site Name: Prushy Draw	161년	
				b Car	08 West Isbad, Ne	Stevens S	Street		Site Name: Brushy Draw	וסוד	
				Cal	isbau, NE	WINEXIC	00220		RP or Incident Number:	2024007	
					0.111		-		WSP Job Number: TE01		
				IC / SOIL			G		Logged By: TC		thod: Excavator
at/Lo	ng: 32.133	3211, -103	3.92763		Field Scre				Hole Diame 2'	Tota	al Depth: 2 feet bgs
omm	ents: All c	hloride fie	ld scre	enings includ	Hach chlo						
	st; D-dry; \			erningo morac	10 4 40 70 0	oncotion	40101				
Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	(ft bgs)	USCS/Rock Symbol		Lith	ology/Rema	arks
D D	2,783 1,753	0.2 0.1	N N	PH08 PH08	12		SP SP	caliche g SAND, n	gravel, poorly consol	idated, whit ded, fine-ve	ery fine grain, abundant

erenve	d by OC	D: 6/16	/2021	8.51.52 /	M						Page
					WS	SP USA			PH09	[	Date: 03/17/2021
				F	08 Mest	Stevens S	Street		Site Name: Brushy Draw	161H	
				Car	Isbad, Ne	w Mexico	88220		RP or Incident Number:		
									WSP Job Number: TE012	2921007	
		LITH	OLOG	IC / SOIL	SAMPL	ING LO	G		Logged By: TC	ſ	Method: Excavator
Lat/Lo	ng: 32.133	3211, -103	3.92763	9	Field Scre	ening:			Hole Diame 2'	-	Total Depth: 2 feet bgs
						oride strips,					
	nents: All c ist; D-dry; `			enings inclue	le a 40% c	orrection fa	actor				
IVI-IIIOI	si, D-ary,	r-yes, iv-	no				~				
∃ E	) de	۲ O	g	#	Sample		oct				
stu ntei	oric pm	Vapor (ppm)	inir	alqr	Depth	Depth	S/R nb		Litho	ology/Re	marks
Moisture Content	Chloride (ppm)	Va p	Staining	Sample #	(ft bgs)	(ft bgs)	USCS/Rock Symbol			07	
	•			0)			ŝn				
						0					
						+					
D	314	0.3	Ν	PH09	1	1	SP				-very fine grain, abundant
5	007	0.0		DUICO			05	caliche g	ravel, poorly consolic	dated, w	hite crusting, no odor
D	207	0.0	Ν	PH09	2	2	SP				-very fine grain, abundant hite crusting, no odor
										aucu, W	
							TD @	🦻 2 ft bgs			

ceive	d by OC	D: 6/16	/2021	8:51:52 A	M						Page 4
					WS	SP USA			PH10	Date: 06/11/2021	
						Stores	Street		Site Name: Brushy Draw	161H	
				b Car	U8 West Isbad Me	Stevens S w Mexico					
				Cal	isbau, NE		00220		RP or Incident Number:	2024.007	
									WSP Job Number: TE01		
				IC / SOIL			G		Logged By: TC	Method: Exacava	
at/Lo	ng: 32.133	211, -103	3.92763		Field Scre	-			Hole Diame 2'	Total Depth: 2 fee	et bgs
omm	onto: All of	blorido fic	ld coro	enings includ		oride strips,					
	st; D-dry; \			enings includ	ie a 40 % C	Onection	acioi				
	ot, 2 a.y, .	, , , , , , , , , , , , , , , , , , , ,					$\prec$				
t t	) de	r (	ng	e #	Sample	Denth	0 00				
Content	lori pm	Vapor (ppm)	linii	ldu	Depth	Deptil	S/F mb		Lith	ology/Remarks	
00	Chloride (ppm)	, S	Staining	Sample #	(ft bgs)	(ft bgs)	USCS/Rock Symbol				
							Ď				
						0					
D	269	0.0	Ν	PH10	1	1	SP	SAND, n	noist, tan, poorly gra	ded, fine-very fine grai	n, abundant
_	450.0	0.0		DUIA			05	caliche g	ravel, poorly consol	idated, white crusting, ded, fine-very fine grai	no odor
D	<156.8	0.0	Ν	PH10	2	2	SP	SAND, n	noist, tan, poorly gra	ded, fine-very fine grai idated, white crusting,	n, abundant
								Callente (	naver, poony consol	idated, white clusting,	

ceive	d by OC	D: 6/16	/2021	్రంలోమెంలోము ఉం								ige 4
					WS	SP USA			PH11	C	Date: 06/11/2021	
					00.00	Charles	Chronet		Site Name: Brushy Drav	w 161⊔		
				Car Car	08 West Isbad, Ne	Stevens 3			RP or Incident Number:			
				Cal	isbau, NC	W WEXIC	00220					
		1.1991.1			04445		0		WSP Job Number: TE0	1		
				IC / SOIL			G		Logged By: TC		Aethod: Excavator	
at/Lor	ng: 32.133	211, -103	3.92763	9	Field Scre	-	515		Hole Diame 2'	Т	Total Depth: 2 feet bgs	
omm	onte: All of	blorido fic	ld coro	enings includ	Hach chlo							
	st; D-dry; \			enings includ	ie a 40% c	onection	actor					
i mol	St, D ury, I	yc3, 111	10				~					
2 12	) de	L O	b	#	Sample		USCS/Rock Symbol					
Content	oric	od	inir	ple	Depth	Deptil	S/R nb(		Lith	nology/Re	marks	
Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	(ft bgs)	(ft bgs)	Syr			5,		
. –	0		0,	0	( 5-/		n N					
						0						
						-						
					-	-						
D	190	0.0	NI	PH11	4	1	SP	SAND ~	niet ton noorly are	adod fine	worw find grain chundar	ot.
ט	190	0.0	Ν	FUII	1	1		caliche c	ioist, tati, poorly conso	lidated w	-very fine grain, abundar	п
D	<156.8	0.0	Ν	PH11	2	2	SP	SAND. n	noist, tan. poorly are	aded. fine	hite crusting, no odor -very fine grain, abundar	nt
								caliche g	ravel, poorly conso	lidated, w	hite crusting, no odor	
												_
<b>`</b>							TD -	🦻 2 ft bgs				
							10 6					

					We	DUCA			PH12	Date: 06/11/2021	nge
						PUSA					
				5	08 West	Stevens S	Street		Site Name: Brushy Drav	v 161H	
				Car	lsbad, Ne	wiviexico	88220		RP or Incident Number:	10001007	
		1.177.1			O A LAD		0		WSP Job Number: TE0		
st/l	na: 00 400			IC / SOIL			6		Logged By: TC	Method:Excavator	hao
al/L0	ng: 32.133	o∠++, -103	5.92763		Field Scre Hach chlo		PID		Hole Diame 2'	Total Depth: 2 feet	ngs
				enings incluc						L	
-moi	st; D-dry; `	Y-yes; N-ı	no								
Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	(ft bgs)	USCS/Rock Symbol		Lith	ology/Remarks	
D	190 <156.8	0.4	N N	PH12 PH12	1 1 2	0 1 2	SP SP	caliche g SAND, m	ravel, poorly conso loist, tan, poorly gra	ided, fine-very fine grain lidated, white crusting, r ided, fine-very fine grain lidated, white crusting, r	no odor n, abundant

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	PHOTOGRAPHIC LOG	
XTO Energy, Inc.	PLU 18 Brushy Draw CTB/161H	TE012921007 &
	Rural Eddy County, New Mexico	TE012921019

Photo No. Date
1 January 26, 2021
Vestern view of the release extent amongst processing equipment





	PHOTOGRAPHIC LOG	
XTO Energy, Inc.	PLU 18 Brushy Draw CTB/161H	TE012921007 &
	Rural Eddy County, New Mexico	TE012921019

Photo No.	Date	
3	March 16, 2021	
	on activities	

Photo No.	Date	the second se
4	March 17, 2021	
Western view of	f excavation extent	<image/>

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# 🔅 eurofins

## Environment Testing America

## **ANALYTICAL REPORT**

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

## Laboratory Job ID: 890-206-1

Laboratory Sample Delivery Group: TE012921019 Client Project/Site: PLU 18 BD CTB 161H

## For:

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

Attn: Dan Moir

RAMER

Authorized for release by: 2/18/2021 3:08:24 PM

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

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

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

LINKS **Review your project** results through Total Access Have a Question? Ask-The Expert

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Visit us at:

Laboratory Job ID: 890-206-1

SDG: TE012921019

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Sample Summary	21
Chain of Custody	22
	23

## **Definitions/Glossary**

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H Job ID: 890-206-1 SDG: TE012921019

Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VO	Α	5
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not	
	applicable.	8
U	Indicates the analyte was analyzed for but not detected.	
Glossary		9
Abbreviation	These commonly used abbreviations may or may not be present in this report.	40
¤	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	13
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 POS	Negative / Absent Positive / Present	
PQL		
	Practical Quantitation Limit Prosumptive	
PRES QC	Presumptive Quality Control	
RER	Quality Control	
	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

Job ID: 890-206-1 SDG: TE012921019

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#### Job ID: 890-206-1

#### Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-206-1

#### Receipt

The samples were received on 2/11/2021 3:42 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 0.8°C

#### GC VOA

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

#### GC Semi VOA

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

#### HPLC/IC

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

## **Client Sample Results**

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

#### **Client Sample ID: SS01** Date Collected: 02/11/21 09:31 Date Received: 02/11/21 15:42

Method: 8021B - Volatile O	•				_	- ·		
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/12/21 08:56	02/16/21 19:34	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/12/21 08:56	02/16/21 19:34	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/12/21 08:56	02/16/21 19:34	1
m,p-Xylenes	<0.00401	U	0.00401	mg/Kg		02/12/21 08:56	02/16/21 19:34	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/12/21 08:56	02/16/21 19:34	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		02/12/21 08:56	02/16/21 19:34	1
Xylenes, Total	<0.00200	U	0.00200	mg/Kg		02/12/21 08:56	02/16/21 19:34	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene	106		70 - 130			02/12/21 08:56	02/16/21 19:34	1
4-Bromofluorobenzene (Surr)	92		70 - 130			02/12/21 08:56	02/16/21 19:34	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<50.2	U	50.2	mg/Kg		02/12/21 09:30	02/12/21 19:29	1
Total TPH	<50.2	U	50.2	mg/Kg		02/12/21 09:30	02/12/21 19:29	1
>C10-C28	<50.2	U	50.2	mg/Kg		02/12/21 09:30	02/12/21 19:29	1
>C28-C35	<50.2	U	50.2	mg/Kg		02/12/21 09:30	02/12/21 19:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 135			02/12/21 09:30	02/12/21 19:29	1
o-Terphenyl	99		70 - 135			02/12/21 09:30	02/12/21 19:29	1

Method: 300.0 - Anions, Ion Cl	nromatogra	phy - Solub	le					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15300		198	mg/Kg			02/12/21 19:57	20

#### **Client Sample ID: SS02** Date Collected: 02/11/21 09:33

## Date Received: 02/11/21 15:42

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/12/21 08:56	02/16/21 19:56	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/12/21 08:56	02/16/21 19:56	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/12/21 08:56	02/16/21 19:56	1
m,p-Xylenes	<0.00398	U	0.00398	mg/Kg		02/12/21 08:56	02/16/21 19:56	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/12/21 08:56	02/16/21 19:56	1
Total BTEX	<0.00199	U	0.00199	mg/Kg		02/12/21 08:56	02/16/21 19:56	1
Xylenes, Total	<0.00199	U	0.00199	mg/Kg		02/12/21 08:56	02/16/21 19:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene	104		70 - 130			02/12/21 08:56	02/16/21 19:56	1
4-Bromofluorobenzene (Surr)	92		70 - 130			02/12/21 08:56	02/16/21 19:56	1

Method: 8015B NM - I	Diesel Range Organics (DR	RO) (GC)					
Analyte	Result Qualifie	er RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<50.2 U	50.2	mg/Kg		02/12/21 09:30	02/12/21 19:48	1
Total TPH	<50.2 U	50.2	mg/Kg		02/12/21 09:30	02/12/21 19:48	1
>C10-C28	<50.2 U	50.2	mg/Kg		02/12/21 09:30	02/12/21 19:48	1
>C28-C35	<50.2 U	50.2	mg/Kg		02/12/21 09:30	02/12/21 19:48	1

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Job ID: 890-206-1 SDG: TE012921019

## Lab Sample ID: 890-206-1

Matrix: Solid

5

3 4 5

## **Client Sample Results**

Job ID: 890-206-1 SDG: TE012921019

lient Sample ID: SS02						Lab Sam	ple ID: 890-	-206-
ate Collected: 02/11/21 09:33							Matrix	
ate Received: 02/11/21 15:42								
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	101		70 - 135			02/12/21 09:30		
p-Terphenyl	98		70 - 135			02/12/21 09:30	02/12/21 19:48	
Method: 300.0 - Anions, Ion C					_	_		
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil F
Chloride	17600		199	mg/Kg			02/12/21 20:14	
lient Sample ID: SS03						Lab Sam	ple ID: 890-	
ate Collected: 02/11/21 09:36 ate Received: 02/11/21 15:42							Matrix	(: So
Method: 8021B - Volatile Orga	anic Compo	unds (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil F
Benzene	< 0.00202	U	0.00202	mg/Kg		02/12/21 08:56	02/17/21 16:48	
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		02/12/21 08:56	02/17/21 16:48	
Toluene	<0.00202	U	0.00202	mg/Kg		02/12/21 08:56	02/17/21 16:48	
n,p-Xylenes	<0.00404	U	0.00404	mg/Kg		02/12/21 08:56	02/17/21 16:48	
o-Xylene	<0.00202	U	0.00202	mg/Kg		02/12/21 08:56	02/17/21 16:48	
Total BTEX	<0.00202	U	0.00202	mg/Kg		02/12/21 08:56	02/17/21 16:48	
Xylenes, Total	<0.00202	U	0.00202	mg/Kg		02/12/21 08:56	02/17/21 16:48	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil I
1,4-Difluorobenzene	97		70 - 130			02/12/21 08:56	02/17/21 16:48	
4-Bromofluorobenzene (Surr)	94		70 - 130			02/12/21 08:56	02/17/21 16:48	
Method: 8015B NM - Diesel R			• •		_			
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil F
C6-C10	<50.2	U	50.2	mg/Kg		02/12/21 09:30	02/12/21 20:08	
Total TPH	1090		50.2	mg/Kg		02/12/21 09:30	02/12/21 20:08	
>C10-C28	1000		50.2	mg/Kg		02/12/21 09:30		
>C28-C35	90.8		50.2	mg/Kg		02/12/21 09:30	02/12/21 20:08	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil I
1-Chlorooctane	95		70 - 135			02/12/21 09:30	02/12/21 20:08	
o-Terphenyl	93		70 - 135			02/12/21 09:30	02/12/21 20:08	
Method: 300.0 - Anions, Ion C		• •		11-14	-	Duonenced	A mak	
Analyte		Qualifier		Unit	D	Prepared	Analyzed	Dil F
Chloride	7080		200	mg/Kg			02/12/21 20:20	
lient Sample ID: SS04						Lab Sam	ple ID: 890-	
ate Collected: 02/11/21 09:40							Matrix	:: Sol

wiethod: 8021B - Volatile Organ	пс сотро	unas (GC)					
Analyte	Result	Qualifier	RL	Unit D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg	02/12/21 08:56	02/17/21 17:10	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg	02/12/21 08:56	02/17/21 17:10	1
Toluene	<0.00202	U	0.00202	mg/Kg	02/12/21 08:56	02/17/21 17:10	1
m,p-Xylenes	< 0.00403	U	0.00403	mg/Kg	02/12/21 08:56	02/17/21 17:10	1
o-Xylene	<0.00202	U	0.00202	mg/Kg	02/12/21 08:56	02/17/21 17:10	1
Total BTEX	<0.00202	U	0.00202	mg/Kg	02/12/21 08:56	02/17/21 17:10	1

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Client: WSP USA Inc.

## Client Sample Results

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

#### Client Sample ID: SS04 Date Collected: 02/11/21 09:40 Date Received: 02/11/21 15:42

Date Received: 02/11/21 15:4	42							
Method: 8021B - Volatile O	rganic Compo	unds (GC)	(Continued)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	<0.00202	U	0.00202	mg/Kg		02/12/21 08:56	02/17/21 17:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene	108		70 - 130			02/12/21 08:56	02/17/21 17:10	1
4-Bromofluorobenzene (Surr)	90		70 - 130			02/12/21 08:56	02/17/21 17:10	1
	Range Organ	ics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<50.0	U	50.0	mg/Kg		02/12/21 09:30	02/12/21 21:06	1

Total TPH >C10-C28	<50.0 <50.0		50.0 50.0	mg/Kg mg/Kg		02/12/21 21:06 02/12/21 21:06	1 1
>C28-C35	<50.0	U	50.0	mg/Kg	02/12/21 09:30	02/12/21 21:06	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 135		02/12/21 09:30	02/12/21 21:06	1
o-Terphenyl	97		70 - 135		02/12/21 09:30	02/12/21 21:06	1

Method: 300.0 - Anions, Ion Cl	hromatography - So	oluble					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	C
Chloride	7940	202	mg/Kg			02/12/21 20:26	

#### **Client Sample ID: SS05** Date Collected: 02/11/21 09:42 Date Received: 02/11/21 15:42

Method: 8021B - Volatile Organic Compounds (GC) **Result Qualifier** RL Analyte Unit D Prepared Analyzed <0.00200 U Benzene 0.00200 mg/Kg Ethylbenzene <0.00200 U 0.00200 mg/Kg 02/12/21 08:56 Toluene <0.00200 U 0.00200 mg/Kg m,p-Xylenes <0.00401 U 0.00401 mg/Kg o-Xylene <0.00200 U 0.00200 mg/Kg Total BTEX 02/12/21 08:56 02/16/21 21:03 <0.00200 U 0.00200 mg/Kg 0.00200 02/12/21 08:56 02/16/21 21:03 Xylenes, Total <0.00200 U mg/Kg %Recovery Qualifier Limits Surrogate Prepared Analyzed 1,4-Difluorobenzene 106 70 - 130 4-Bromofluorobenzene (Surr) 94 70 - 130

#### Method: 8015B NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier RL Unit D Dil Fac Prepared Analyzed C6-C10 <50.3 U 50.3 mg/Kg 02/12/21 09:30 02/12/21 20:27 Total TPH 50.3 <50.3 U mg/Kg 02/12/21 09:30 02/12/21 20:27 1 >C10-C28 <50.3 U 50.3 mg/Kg 02/12/21 09:30 02/12/21 20:27 1 >C28-C35 50.3 <50.3 U mg/Kg 02/12/21 09:30 02/12/21 20:27 1 Qualifier Surrogate %Recovery I imits Prepared Analyzed Dil Fac 1-Chlorooctane 70 - 135 02/12/21 09:30 02/12/21 20:27 92 1 o-Terphenyl 88 70 - 135 02/12/21 09:30 02/12/21 20:27 1

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> 1

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1

1

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1

Dil Fac

Dil Fac 20

Matrix: Solid

Job ID: 890-206-1 SDG: TE012921019

## Lab Sample ID: 890-206-4 Matrix: Solid

Lab Sample ID: 890-206-5

Dil Fac 02/12/21 08:56 02/16/21 21:03 02/16/21 21:03 02/12/21 08:56 02/16/21 21:03 02/12/21 08:56 02/16/21 21:03 02/12/21 08:56 02/16/21 21:03

#### **Client Sample Results** Client: WSP USA Inc. Job ID: 890-206-1 Project/Site: PLU 18 BD CTB 161H SDG: TE012921019 **Client Sample ID: SS05** Lab Sample ID: 890-206-5 Date Collected: 02/11/21 09:42 Matrix: Solid Date Received: 02/11/21 15:42 Method: 300.0 - Anions, Ion Chromatography - Soluble 5 Result Qualifier Analyte RL Unit D Prepared Analyzed Dil Fac Chloride 15100 200 mg/Kg 02/12/21 20:31 20

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## **Surrogate Summary**

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

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

_				ercent Surrogate Recovery (Acceptance Limits)	
		DFBZ1	BFB1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		5
890-206-1	SS01	106	92		
890-206-2	SS02	104	92		6
890-206-3	SS03	97	94		
890-206-4	SS04	108	90		
890-206-5	SS05	106	94		
890-209-A-49-C MS	Matrix Spike	100	91		8
890-209-A-49-D MSD	Matrix Spike Duplicate	99	92		
LCS 890-258/2-A	Lab Control Sample	99	89		0
LCS 890-278/2-A	Lab Control Sample	100	85		9
LCSD 890-258/3-A	Lab Control Sample Dup	97	88		
LCSD 890-278/3-A	Lab Control Sample Dup	97	83		
MB 890-258/1-A	Method Blank	101	97		
MB 890-278/1-A	Method Blank	106	88		
Surrogate Legend					
DFBZ = 1,4-Difluorober	Izene				
BFB = 4-Bromofluorobe	nzene (Surr)				13

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

			Perc	ent Surrogate
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-135)	(70-135)	
890-201-A-1-D MS	Matrix Spike	103	94	
890-201-A-1-E MSD	Matrix Spike Duplicate	111	102	
890-206-1	SS01	101	99	
890-206-2	SS02	101	98	
890-206-3	SS03	95	93	
890-206-4	SS04	100	97	
890-206-5	SS05	92	88	
LCS 890-259/2-A	Lab Control Sample	118	107	
LCSD 890-259/3-A	Lab Control Sample Dup	113	100	
MB 890-259/1-A	Method Blank	105	103	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

#### Job ID: 890-206-1 SDG: TE012921019

Prep Type: Total/NA

## Prep Type: Total/NA

2/18/2021

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Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

Lab Sample ID: MB 890-258/1-A

Matrix: Solid

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

Analysis Batch: 279							Prep Bate	
	МВ	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/12/21 08:56	02/16/21 14:00	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/12/21 08:56	02/16/21 14:00	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/12/21 08:56	02/16/21 14:00	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		02/12/21 08:56	02/16/21 14:00	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/12/21 08:56	02/16/21 14:00	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		02/12/21 08:56	02/16/21 14:00	1
Xylenes, Total	<0.00200	U	0.00200	mg/Kg		02/12/21 08:56	02/16/21 14:00	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene			70 - 130			02/12/21 08:56	02/16/21 14:00	1
4-Bromofluorobenzene (Surr)	97		70 - 130			02/12/21 08:56	02/16/21 14:00	1

#### Lab Sample ID: LCS 890-258/2-A Matrix: Solid Analysis Batch: 279

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08349		mg/Kg		83	70 - 130	
Ethylbenzene	0.100	0.09199		mg/Kg		92	71 - 129	
Toluene	0.100	0.09361		mg/Kg		94	70 - 130	
m,p-Xylenes	0.200	0.1821		mg/Kg		91	70 - 135	
o-Xylene	0.100	0.09134		mg/Kg		91	71 - 133	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,4-Difluorobenzene	99		70 - 130
4-Bromofluorobenzene (Surr)	89		70 - 130

#### Lab Sample ID: LCSD 890-258/3-A Matrix: Solid Analysis Batch: 279

Analysis Batch: 279						Pre	b Batch	n: 258	
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08513		mg/Kg		85	70 - 130	2	35
Ethylbenzene	0.100	0.09410		mg/Kg		94	71 - 129	2	35
Toluene	0.100	0.09548		mg/Kg		95	70 - 130	2	35
m,p-Xylenes	0.200	0.1877		mg/Kg		94	70 - 135	3	35
o-Xylene	0.100	0.09434		mg/Kg		94	71 - 133	3	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1,4-Difluorobenzene	97		70 - 130
4-Bromofluorobenzene (Surr)	88		70 - 130

## Lab Sample ID: MB 890-278/1-A Matrix: Solid

Analysis Batch: 279							Prep Bato	:h: 278
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/16/21 11:20	02/17/21 13:04	1

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Prep Type: Total/NA

**Client Sample ID: Method Blank** 

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7

#### Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 258

**Client Sample ID: Lab Control Sample** 

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

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 258

Released to Imaging: 7/13/2021 2:49:23 PM

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

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

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## **Client Sample ID: Method Blank Prep Type: Total/NA** Prep Batch: 278

**Client Sample ID: Lab Control Sample** 

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

Prep Type: Total/NA

Prep Type: Total/NA

Lab Sample ID: MB 890-278/1-A **Matrix: Solid Analysis Batch: 279** 

	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/16/21 11:20	02/17/21 13:04	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/16/21 11:20	02/17/21 13:04	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		02/16/21 11:20	02/17/21 13:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/16/21 11:20	02/17/21 13:04	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		02/16/21 11:20	02/17/21 13:04	1
Xylenes, Total	<0.00200	U	0.00200	mg/Kg		02/16/21 11:20	02/17/21 13:04	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene	106		70 - 130			02/16/21 11:20	02/17/21 13:04	1
4-Bromofluorobenzene (Surr)	88		70 - 130			02/16/21 11:20	02/17/21 13:04	1

#### Lab Sample ID: LCS 890-278/2-A **Matrix: Solid Analysis Batch: 279**

Analysis Batch: 279					Prep Batch: 2	278
	Spike	LCS LCS			%Rec.	- i
Analyte	Added	Result Qualifie	r Unit	D %Rec	Limits	
Benzene	0.100	0.09183	mg/Kg	92	70 - 130	_
Ethylbenzene	0.100	0.08875	mg/Kg	89	71 - 129	
Toluene	0.100	0.09328	mg/Kg	93	70 - 130	
m,p-Xylenes	0.200	0.1716	mg/Kg	86	70 - 135	
o-Xylene	0.100	0.08770	mg/Kg	88	71 - 133	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,4-Difluorobenzene	100		70 - 130
4-Bromofluorobenzene (Surr)	85		70 - 130

#### Lab Sample ID: LCSD 890-278/3-A Matrix: Solid

#### **Analysis Batch: 279**

Analysis Batch: 279						Pre	Batch	
	Spike	LCSD LCSD				%Rec.		RPD
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08639	mg/Kg		86	70 - 130	6	35
Ethylbenzene	0.100	0.08990	mg/Kg		90	71 - 129	1	35
Toluene	0.100	0.09256	mg/Kg		93	70 - 130	1	35
m,p-Xylenes	0.200	0.1739	mg/Kg		87	70 - 135	1	35
o-Xylene	0.100	0.08867	mg/Kg		89	71 - 133	1	35
10								

	LUSD LUSD	
Surrogate	%Recovery Qualif	ier Limits
1,4-Difluorobenzene	97	70 - 130
4-Bromofluorobenzene (Surr)	83	70 - 130

#### Lab Sample ID: 890-209-A-49-C MS Matrix: Solid Analysis Batch: 279

Analysis Batch: 279									Prep	Batch: 278
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.0196	U	0.909	0.9539		mg/Kg		105	70 - 130	
Ethylbenzene	<0.0196	U	0.909	0.9943		mg/Kg		109	71 - 129	

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Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H Job ID: 890-206-1 SDG: TE012921019

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

Lab Gampio IB. 000 200	A-49-C MS						CI	ient Sa	mple ID: I		
Matrix: Solid									Prep Ty	pe: Tot	tal/NA
Analysis Batch: 279									Prej	p Batch	n: 278
		Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Toluene	<0.0196	U	0.909	0.9836		mg/Kg		108	70 - 130		
m,p-Xylenes	< 0.0392	U	1.82	1.858		mg/Kg		102	70 - 135		
o-Xylene	<0.0196	U	0.909	0.9317		mg/Kg		102	71 - 133		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1,4-Difluorobenzene	100		70 - 130								
4-Bromofluorobenzene (Surr)	91		70 - 130								
Matrix: Solid	A-49-D MSD					Client	Samp	le ID: N	latrix Spil Prep Ty	pe: Tot	tal/NA
Lab Sample ID: 890-209- Matrix: Solid Analysis Batch: 279		Sampla	Spiko	Men	MSD	Client \$	Samp	le ID: N	Prep Ty Prej		t <mark>al/NA</mark> n: 278
Matrix: Solid Analysis Batch: 279	Sample	Sample	Spike	-	MSD Qualifier				Prep Ty Prej %Rec.	pe: Tot p Batch	tal/NA n: 278 RPD
Matrix: Solid Analysis Batch: 279 Analyte	Sample Result	Qualifier	Added	Result	MSD Qualifier	Unit	Samp	%Rec	Prep Ty Prej %Rec. Limits	pe: Tot p Batch 	tal/NA n: 278 RPD Limit
Matrix: Solid Analysis Batch: 279 Analyte Benzene	Sample 	Qualifier	Added	<b>Result</b> 1.009	-	Unit mg/Kg		%Rec 103	Prep Ty Prep %Rec. Limits 70 - 130	pe: Tot p Batch <u>RPD</u> 6	tal/NA n: 278 RPD Limit
Matrix: Solid Analysis Batch: 279 Analyte Benzene Ethylbenzene	Sample Result <0.0196 <0.0196	Qualifier U U	Added 0.980 0.980	<b>Result</b> 1.009 1.078	-	Unit mg/Kg mg/Kg		<b>%Rec</b> 103 110	Prep Ty Prep %Rec. Limits 70 - 130 71 - 129	pe: Tot p Batch RPD 6 8	tal/NA n: 278 RPD Limit 35 35
Matrix: Solid Analysis Batch: 279 Analyte Benzene Ethylbenzene Toluene	Sample Result <0.0196 <0.0196 <0.0196	Qualifier U U U	Added 0.980 0.980 0.980 0.980	<b>Result</b> 1.009 1.078 1.046	-	Unit mg/Kg mg/Kg mg/Kg		%Rec 103 110 107	Prep Ty Prep %Rec. Limits 70 - 130 71 - 129 70 - 130	pe: Tot p Batch RPD 6 8 6	tal/NA n: 278 RPD Limit 35 35
Matrix: Solid Analysis Batch: 279 Analyte Benzene Ethylbenzene Toluene m,p-Xylenes	Sample Result <0.0196 <0.0196 <0.0196 <0.0392	Qualifier U U U U	Added 0.980 0.980 0.980 1.96	Result 1.009 1.078 1.046 2.007	-	Unit mg/Kg mg/Kg mg/Kg		%Rec 103 110 107 102	Prep Ty Prep %Rec. Limits 70 - 130 71 - 129 70 - 130 70 - 135	pe: Tot p Batch RPD 6 8 6 8 8	tal/NA n: 278 RPD Limit 35 35 35
Matrix: Solid Analysis Batch: 279 Analyte Benzene Ethylbenzene Toluene m,p-Xylenes	Sample Result <0.0196 <0.0196 <0.0196	Qualifier U U U U	Added 0.980 0.980 0.980 0.980	<b>Result</b> 1.009 1.078 1.046	-	Unit mg/Kg mg/Kg mg/Kg		%Rec 103 110 107	Prep Ty Prep %Rec. Limits 70 - 130 71 - 129 70 - 130	pe: Tot p Batch RPD 6 8 6	tal/NA n: 278 RPD Limit 35 35 35 35
Matrix: Solid Analysis Batch: 279 Analyte Benzene Ethylbenzene Toluene m,p-Xylenes	Sample Result <0.0196 <0.0196 <0.0196 <0.0392 <0.0196	Qualifier U U U U	Added 0.980 0.980 0.980 1.96	Result 1.009 1.078 1.046 2.007	-	Unit mg/Kg mg/Kg mg/Kg		%Rec 103 110 107 102	Prep Ty Prep %Rec. Limits 70 - 130 71 - 129 70 - 130 70 - 135	pe: Tot p Batch RPD 6 8 6 8 8	tal/NA n: 278 RPD Limit 35 35 35 35
Matrix: Solid Analysis Batch: 279 Analyte Benzene Ethylbenzene Toluene m,p-Xylenes o-Xylene	Sample Result <0.0196 <0.0196 <0.0196 <0.0392 <0.0196	Qualifier U U U U U U U MSD	Added 0.980 0.980 0.980 1.96	Result 1.009 1.078 1.046 2.007	-	Unit mg/Kg mg/Kg mg/Kg		%Rec 103 110 107 102	Prep Ty Prep %Rec. Limits 70 - 130 71 - 129 70 - 130 70 - 135	pe: Tot p Batch RPD 6 8 6 8 8	tal/NA n: 278 RPD Limit 35 35 35 35
Matrix: Solid Analysis Batch: 279 Analyte Benzene Ethylbenzene	Sample Result <0.0196 <0.0196 <0.0392 <0.0196 <i>MSD</i>	Qualifier U U U U U U U MSD	Added 0.980 0.980 0.980 1.96 0.980	Result 1.009 1.078 1.046 2.007	-	Unit mg/Kg mg/Kg mg/Kg		%Rec 103 110 107 102	Prep Ty Prep %Rec. Limits 70 - 130 71 - 129 70 - 130 70 - 135	pe: Tot p Batch RPD 6 8 6 8 8	tal/NA

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

#### Lab Sample ID: MB 890-259/1-A Matrix: Solid Analysis Batch: 263

	MB	MB					
Analyte	Result	Qualifier	RL	Unit	D Prepared	Analyzed	Dil Fac
C6-C10	<50.0	U	50.0	mg/Kg	02/12/21 09:30	02/12/21 17:29	1
Total TPH	<50.0	U	50.0	mg/Kg	02/12/21 09:30	02/12/21 17:29	1
>C10-C28	<50.0	U	50.0	mg/Kg	02/12/21 09:30	02/12/21 17:29	1
>C28-C35	<50.0	U	50.0	mg/Kg	02/12/21 09:30	02/12/21 17:29	1
	MB	MB					

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	105	70 - 135
o-Terphenyl	103	70 - 135

#### Lab Sample ID: LCS 890-259/2-A Matrix: Solid

## Analysis Batch: 263

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
C6-C10	1000	1153		mg/Kg		115	70 - 135	
>C10-C28	1000	1005		mg/Kg		101	70 - 135	

Eurofins Xenco, Carlsbad

**Client Sample ID: Method Blank** 

Analyzed

Prep Type: Total/NA

Prep Batch: 259

Prepared

02/12/21 09:30 02/12/21 17:29

02/12/21 09:30 02/12/21 17:29

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 259

Dil Fac

1

1

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Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

## **Method**

ab Sample ID: LCS 89	0-259/2-A					Clier	nt Sai	mple ID	: Lab Cor	trol Sa	mple
atrix: Solid									Prep Ty	pe: Tot	al/NA
nalysis Batch: 263									Prep	Batch	1: 259
	LCS										
Surrogate -Chlorooctane	<b>%Recovery</b> 118	Qualifier	Limits 70 - 135								
-Critoroociane -Terphenyl	107		70 - 135 70 - 135								
- Terphenyi	107		70-700								
ab Sample ID: LCSD 8	90-259/3-A				C	lient Sa	mple	ID: Lab	<b>Control</b>	Sample	Dup
Aatrix: Solid									Prep Ty		
Analysis Batch: 263									Prep	<b>Batch</b>	
			Spike		LCSD				%Rec.		RPD
nalyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
C6-C10			1000	1122		mg/Kg		112	70 - 135	3	25
·C10-C28			1000	952.8		mg/Kg		95	70 - 135	5	25
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
-Chlorooctane			70 - 135								
-Terphenyl	100		70 - 135								
ab Sample ID: 890-201	-A-1-D MS						CI	ient Sa	mple ID: I		
Matrix: Solid									Prep Ty	•	
Analysis Batch: 263									-	<b>Batch</b>	1: 259
		Sample	Spike		MS		_		%Rec.		
nalyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
6-C10	<50.1		999	988.2		mg/Kg		99	70 - 135		
Total TPH	<50.1		2000	1791		mg/Kg		90	70 405		
·C10-C28	<50.1	U	999	802.9		mg/Kg		80	70 - 135		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
-Chlorooctane	103		70 - 135								
-Terphenyl	94		70 - 135								
										_	
ab Sample ID: 890-201	-A-1-E MSD					Client	samp	IE ID: N	latrix Spil		
Matrix: Solid									Prep Ty		
Analysis Batch: 263	Sampla	Somela	Spike	Med	MED					Batch	
Analyte	-	Sample Qualifier	Spike Added		MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10			1000	1025	Juaimer	mg/Kg		102	70 - 135	4	35
Total TPH	<50.1		2010	1896		mg/Kg mg/Kg		94	10-100	4	55
C10-C28	<50.1		1000	871.3		mg/Kg		94 87	70 - 135	8	35
			1000	571.5				07	70-100	0	00
		MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	111		70 - 135								
p-Terphenyl	102		70 - 135								

Job ID: 890-206-1

SDG: TE012921019

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Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 890-27 Matrix: Solid	1/1 <b>-A</b>							С	lier	nt Sam	ple ID: M Prep T	lethod I ype: Sc	
Analysis Batch: 275													
Awalista		MB MB sult Qualifier		RL		Unit		<b>_</b>	<b>D</b>		<b>A</b>		Dil Fac
Analyte				<b>RL</b> 10.0				D	Pre	epared	Analy 02/12/21		
Chloride	<1	0.0 0		10.0		mg/K	g				02/12/21	19:40	1
Lab Sample ID: LCS 890-27 Matrix: Solid	71/2- <b>A</b>						Cli	ent S	am	ple ID	: Lab Co Prep T	ntrol Sa ype: Sc	
Analysis Batch: 275													
			Spike		LCS						%Rec.		
Analyte			Added			Qualifier	Unit		<u>D</u>	%Rec	Limits		
Chloride			500		530.0		mg/Kg			106	90 - 110		
Lab Sample ID: LCSD 890- Matrix: Solid Analysis Batch: 275	271/3-A					C	lient S	amp	le I	D: Lab	Control Prep T	Sample ype: Sc	
			Spike		LCSD	LCSD					%Rec.		RPD
Analyte			Added	F	Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Chloride			500		530.0		mg/Kg			106	90 - 110	0	20
Lab Sample ID: 890-206-1 I	NS									CI	ient Sam	ple ID:	SS01
Matrix: Solid											Prep T	ype: So	oluble
Analysis Batch: 275													
	Sample	Sample	Spike		MS	MS					%Rec.		
Analyte	Result	Qualifier	Added	F	Result	Qualifier	Unit	l	D	%Rec	Limits		
Chloride	15300		499		15030	4	mg/Kg			-60	90 - 110		
Lab Sample ID: 890-206-1 I	NSD									CI	ient Sam	ple ID:	SS01
Matrix: Solid											Prep T	ype: Sc	oluble
Analysis Batch: 275													
	Sample	Sample	Spike		MSD	MSD					%Rec.		RPD
Analyte	Result	Qualifier	Added	F	Result	Qualifier	Unit		<u>D</u>	%Rec	Limits	RPD	Limit
Chloride	15300		505		15250	4	mg/Kg			-16	90 - 110	1	20

## **QC Association Summary**

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H Page 64 of 170

Job ID: 890-206-1 SDG: TE012921019

## GC VOA

#### Prep Batch: 258

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-206-1	SS01	Total/NA	Solid	5035	
890-206-2	SS02	Total/NA	Solid	5035	
890-206-3	SS03	Total/NA	Solid	5035	
890-206-4	SS04	Total/NA	Solid	5035	
890-206-5	SS05	Total/NA	Solid	5035	
MB 890-258/1-A	Method Blank	Total/NA	Solid	5035	
LCS 890-258/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 890-258/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	

#### Prep Batch: 278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 890-278/1-A	Method Blank	Total/NA	Solid	5035	
LCS 890-278/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 890-278/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-209-A-49-C MS	Matrix Spike	Total/NA	Solid	5035	
890-209-A-49-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-206-1	SS01	Total/NA	Solid	8021B	258
890-206-2	SS02	Total/NA	Solid	8021B	258
890-206-3	SS03	Total/NA	Solid	8021B	258
890-206-4	SS04	Total/NA	Solid	8021B	258
890-206-5	SS05	Total/NA	Solid	8021B	258
MB 890-258/1-A	Method Blank	Total/NA	Solid	8021B	258
MB 890-278/1-A	Method Blank	Total/NA	Solid	8021B	278
LCS 890-258/2-A	Lab Control Sample	Total/NA	Solid	8021B	258
LCS 890-278/2-A	Lab Control Sample	Total/NA	Solid	8021B	278
LCSD 890-258/3-A	Lab Control Sample Dup	Total/NA	Solid	8021B	258
LCSD 890-278/3-A	Lab Control Sample Dup	Total/NA	Solid	8021B	278
890-209-A-49-C MS	Matrix Spike	Total/NA	Solid	8021B	278
890-209-A-49-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	278

## GC Semi VOA

#### Prep Batch: 259

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-206-1	SS01	Total/NA	Solid	8015NM Prep	<u> </u>
890-206-2	SS02	Total/NA	Solid	8015NM Prep	
890-206-3	SS03	Total/NA	Solid	8015NM Prep	
890-206-4	SS04	Total/NA	Solid	8015NM Prep	
890-206-5	SS05	Total/NA	Solid	8015NM Prep	
MB 890-259/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 890-259/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 890-259/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-201-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-201-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	
Analysis Batch: 263					

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-206-1	SS01	Total/NA	Solid	8015B NM	259

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## **QC Association Summary**

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

## GC Semi VOA (Continued)

#### **Analysis Batch: 263 (Continued)**

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-206-2	SS02	Total/NA	Solid	8015B NM	259
890-206-3	SS03	Total/NA	Solid	8015B NM	259
890-206-4	SS04	Total/NA	Solid	8015B NM	259
890-206-5	SS05	Total/NA	Solid	8015B NM	259
MB 890-259/1-A	Method Blank	Total/NA	Solid	8015B NM	259
LCS 890-259/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	259
LCSD 890-259/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	259
890-201-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	259
890-201-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	259

#### HPLC/IC

#### Leach Batch: 271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-206-1	SS01	Soluble	Solid	DI Leach	
890-206-2	SS02	Soluble	Solid	DI Leach	
890-206-3	SS03	Soluble	Solid	DI Leach	
890-206-4	SS04	Soluble	Solid	DI Leach	
890-206-5	SS05	Soluble	Solid	DI Leach	
MB 890-271/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 890-271/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 890-271/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-206-1 MS	SS01	Soluble	Solid	DI Leach	
890-206-1 MSD	SS01	Soluble	Solid	DI Leach	

#### Analysis Batch: 275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-206-1	SS01	Soluble	Solid	300.0	271
890-206-2	SS02	Soluble	Solid	300.0	271
890-206-3	SS03	Soluble	Solid	300.0	271
890-206-4	SS04	Soluble	Solid	300.0	271
890-206-5	SS05	Soluble	Solid	300.0	271
MB 890-271/1-A	Method Blank	Soluble	Solid	300.0	271
LCS 890-271/2-A	Lab Control Sample	Soluble	Solid	300.0	271
LCSD 890-271/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	271
890-206-1 MS	SS01	Soluble	Solid	300.0	271
890-206-1 MSD	SS01	Soluble	Solid	300.0	271

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Project/Site: PLU 18 BD CTB 161H

Job ID: 890-206-1 SDG: TE012921019

### Lab Sample ID: 890-206-1 Matrix: Solid

Lab Sample ID: 890-206-3

Lab Sample ID: 890-206-4

Date Collected: 02/11/21 09:31 Date Received: 02/11/21 15:42

**Client Sample ID: SS01** 

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			258	02/12/21 08:56	МС	XC
Total/NA	Analysis	8021B		1	279	02/16/21 19:34	PXS	XC
Total/NA	Prep	8015NM Prep			259	02/12/21 09:30	MC	XC
Total/NA	Analysis	8015B NM		1	263	02/12/21 19:29	BJH	XC
Soluble	Leach	DI Leach			271	02/12/21 15:56	MC	XC
Soluble	Analysis	300.0		20	275	02/12/21 19:57	BJH	XC

#### Client Sample ID: SS02 Date Collected: 02/11/21 09:33 Date Received: 02/11/21 15:42

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			258	02/12/21 08:56	MC	XC
Total/NA	Analysis	8021B		1	279	02/16/21 19:56	PXS	XC
Total/NA	Prep	8015NM Prep			259	02/12/21 09:30	MC	XC
Total/NA	Analysis	8015B NM		1	263	02/12/21 19:48	BJH	XC
Soluble	Leach	DI Leach			271	02/12/21 15:56	MC	XC
Soluble	Analysis	300.0		20	275	02/12/21 20:14	BJH	XC

#### Client Sample ID: SS03 Date Collected: 02/11/21 09:36 Date Received: 02/11/21 15:42

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			258	02/12/21 08:56	МС	XC
Total/NA	Analysis	8021B		1	279	02/17/21 16:48	PXS	XC
Total/NA	Prep	8015NM Prep			259	02/12/21 09:30	MC	XC
Total/NA	Analysis	8015B NM		1	263	02/12/21 20:08	BJH	XC
Soluble	Leach	DI Leach			271	02/12/21 15:56	MC	XC
Soluble	Analysis	300.0		20	275	02/12/21 20:20	BJH	XC

#### Client Sample ID: SS04 Date Collected: 02/11/21 09:40 Date Received: 02/11/21 15:42

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			258	02/12/21 08:56	MC	XC
Total/NA	Analysis	8021B		1	279	02/17/21 17:10	PXS	XC
Total/NA	Prep	8015NM Prep			259	02/12/21 09:30	MC	XC
Total/NA	Analysis	8015B NM		1	263	02/12/21 21:06	BJH	XC
Soluble	Leach	DI Leach			271	02/12/21 15:56	MC	XC
Soluble	Analysis	300.0		20	275	02/12/21 20:26	BJH	XC

Eurofins Xenco, Carlsbad

Matrix: Solid

Matrix: Solid

Matrix: Solid

5 6

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Job ID: 890-206-1 SDG: TE012921019

## **Client Sample ID: SS05** Date Collected: 02/11/21 09:42 Date Received: 02/11/21 15:42

Project/Site: PLU 18 BD CTB 161H

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			258	02/12/21 08:56	МС	XC
Total/NA	Analysis	8021B		1	279	02/16/21 21:03	PXS	XC
Total/NA	Prep	8015NM Prep			259	02/12/21 09:30	MC	XC
Total/NA	Analysis	8015B NM		1	263	02/12/21 20:27	BJH	XC
Soluble	Leach	DI Leach			271	02/12/21 15:56	MC	XC
Soluble	Analysis	300.0		20	275	02/12/21 20:31	BJH	XC

#### Laboratory References:

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

Eurofins Xenco, Carlsbad

## Lab Sample ID: 890-206-5 Matrix: Solid

Released to Imaging: 7/13/2021 2:49:23 PM

**Accreditation/Certification Summary** 

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H Job ID: 890-206-1

## Laboratory: Eurofins Xenco, Carlsbad

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

Authority	Pre	ogram	Identification Number	Expiration Date
Louisiana	NE	LAP	05092	06-30-21
The following enclute	a are included in this rang			
the agency does not o	•	rt, but the laboratory is r	not certified by the governing authority.	This list may include analytes for whic
0,	•	rt, but the laboratory is r Matrix	not certified by the governing authority. Analyte	I his list may include analytes for whic
the agency does not o	offer certification.		, , , , , ,	I his list may include analytes for whic

SDG: TE012921019

Eurofins Xenco, Carlsbad

## **Method Summary**

#### Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

Job ID: 890-206-1 SDG: TE012921019

Method 8021B 8015B NM 300.0	Method Description	Protocol	Laboratory		
3021B	Volatile Organic Compounds (GC)	SW846	XC		
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	XC		
300.0	Anions, Ion Chromatography	MCAWW	XC		
5035	Closed System Purge and Trap	SW846	XC		
015NM Prep	Microextraction	SW846	XC		
OI Leach	Deionized Water Leaching Procedure	ASTM	XC		

#### **Protocol References:**

ASTM = ASTM International

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

#### Laboratory References:

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

Eurofins Xenco, Carlsbad

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## **Sample Summary**

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H Job ID: 890-206-1 SDG: TE012921019

.ab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID	
390-206-1	SS01	Solid	02/11/21 09:31	02/11/21 15:42		
390-206-2	SS02	Solid	02/11/21 09:33	02/11/21 15:42		
390-206-3	SS03	Solid	02/11/21 09:36	02/11/21 15:42		5
390-206-4	SS04	Solid	02/11/21 09:40	02/11/21 15:42		
390-206-5	SS05	Solid	02/11/21 09:42	02/11/21 15:42		
						8
						9
						1
						1
						1

Eurofins Xenco, Carlsbad

Released to Imaging: 7/13/2021 2:49:23 PM

2/18/2021

	Tots Cay are Under	Relinquished by: (Signature) Received 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 contro 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.	Circle Method(s) and Metat(s) to be analyzed TCLP / SPLP 6010: 8RCRA					5502 1 1 1 0933 1	SSO1 5 2-11-21 0931 0:	Sample Identification Matrix Sampled Sampled De	Cooler Custody Seals:     Yes     NA     Correction Factor:     AO       Sample Custody Seals:     Yes     No     N/A     Total Containers:     S	LOO-MNT No Ves	Thermometer IC	SAMPLE RECEIPT Temp Blank: Yes No Wet Ice: Yes	Sampler's Name: Travis Casey Due Date:	Project Number: TE012921019 Routine 0	Project Name: PLU 18 BD CTB 16/14 Turn Around	Phone: (432) 704-5178 Email: travis.	City, State ZIP: Midland, TX 79705 City, S	Address: 3300 North A St. Bldg 1, Unit 222 Address:	ffice	Project Manager: Kalei Jennings Bill to:	Hobbs.NM (575-392-7550)	Houston,TX (28 Midland,TX (43	
σ	2.11-21 1542 2	Date/Time Relinquished	order from client company to Xenco, its affiliates and subcontractors. It a: lifty for any losses or expenses incurred by the client if such losses are di n sample submitted to Xenco, but not analyzed. These terms will be enfor	iexas 11 Al So As Ba Be B Co Ca Cr Co Cu Fe 1710: 8RCRA So As Ba Be Cd Cr Co Cu Pb Mn M						S I X X X	TPH (E	PA 8015	ں ontai 5) 21)	iners	S		8	ANALY	Email: travis.casey@wsp.com, kalei.jennings@wsp.com, dan.moir@w	City, State ZIP: Carlsbad, NM	ss: 3104 E Greene St.	Company Name: XTO Energy	Bill to: (if different) Kyle Littrell	Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	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	
		by: (Signature) Received by: (Signature)	ctors. It assigns standard terms and conditions ses are due to circumstances beyond the control II be enforced unless previously negotiated.								Sa	TAT stal lab,			890-206 Chain of Custody			'SIS REQUEST W	@w Deliverables: EDD ADaPT	Level III ST/UST	]	PRP Brownfields	10	(813-620-2000) www.xenco.com Page	4	
Revised Date 051418 Rev. 2018.1		Date/Time		1631/245.1/7470 /7471 : Hg							Sample Comments	TAT starts the day received by the lab, if received by 4:30pm						Work Order Notes	Other:			kc uperfund	)   	e i ot		

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**13** 14

2/18/2021

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Job Number: 890-206-1 SDG Number: TE012921019

List Source: Eurofins Carlsbad

#### Login Sample Receipt Checklist

Client: WSP USA Inc.

#### Login Number: 206 List Number: 1 Creator: Clifton, Cloe

MS/MSDs

<6mm (1/4").

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 True tampered with. 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 True HTs) 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

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There is sufficient vol. for all requested analyses, incl. any requested

Containers requiring zero headspace have no headspace or bubble is

True

True
Received by OCD: 6/16/2021 8:51:52 AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

#### Laboratory Job ID: 890-371-1

Laboratory SDG: TE012921019/TE012921007 Client Project/Site: PLU 18 BD CTB 161H

#### For:

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

Attn: Courtney Cook

RAMER

Authorized for release by: 3/28/2021 8:32:06 AM

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

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

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

LINKS **Review your project** results through Total Access **Have a Question?** Ask-The Expert Visit us at: www.eurofinsus.com/Env Released to Imaging: 7/13/2021 2:49:23 PM

Laboratory Job ID: 890-371-1 SDG: TE012921019/TE012921007

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2

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

Job ID: 890-371-1 SDG: TE012921019/TE012921007

Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
*1	LCS/LCSD RPD exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VC	A	
Qualifier	Qualifier Description	
*+	LCS and/or LCSD is outside acceptance limits, high biased.	
*1	LCS/LCSD RPD exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		8
Qualifier	Qualifier Description	
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not	9
	applicable.	
U	Indicates the analyte was analyzed for but not detected.	
Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	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	13
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	

#### G

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

**Case Narrative** 

Job ID: 890-371-1 SDG: TE012921019/TE012921007

#### Job ID: 890-371-1

#### Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-371-1

#### Receipt

The samples were received on 3/16/2021 4:45 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 3.8°C

#### **Receipt Exceptions**

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: PH01 (890-371-1), PH01 A (890-371-2), PH02 (890-371-3), PH02 A (890-371-4), PH03 (890-371-5), PH03 A (890-371-6), PH04 (890-371-7), PH04 A (890-371-8), PH05 (890-371-9), PH05 A (890-371-10), PH06 (890-371-11), PH06 A (890-371-12), PH07 (890-371-13) and PH07 A (890-371-14).

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#### **Client Sample Results**

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

#### **Client Sample ID: PH01** Date Collected: 03/16/21 10:06 Date Received: 03/16/21 16:45

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: 890-371-1	
SDG: TE012921019/TE012921007	

Matrix: Solid

Job ID: 890-371-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/24/21 02:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/24/21 02:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/24/21 02:48	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/24/21 02:48	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/21/21 11:57	03/24/21 02:48	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/21/21 11:57	03/24/21 02:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/24/21 02:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130				03/21/21 11:57	03/24/21 02:48	1
1,4-Difluorobenzene (Surr)	101		70 - 130				03/21/21 11:57	03/24/21 02:48	1
Method: 8015B NM - Diesel R	ange Organ	ics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U *+ *1	50.2		mg/Kg		03/18/21 15:13	03/19/21 20:07	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		03/18/21 15:13	03/19/21 20:07	1
Oll Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		03/18/21 15:13	03/19/21 20:07	1
Total TPH	<50.2	U	50.2		mg/Kg		03/18/21 15:13	03/19/21 20:07	1

Surrogate	%Recovery Qualifier	Limits	Prepared Analy	zed Dil Fac
1-Chlorooctane	84	70 - 130	03/18/21 15:13 03/19/21	20:07 1
o-Terphenyl	82	70 - 130	03/18/21 15:13 03/19/21	20:07 1

#### Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualif	ier RL	MDL Unit	t D	Prepared	Analyzed	Dil Fac
Chloride	38.2	4.99	mg/l	Kg —		03/22/21 10:41	1
Client Sample ID: PH01 A					Lab Sam	ple ID: 890	-371-2

#### Client Sample ID: PH01 A Date Collected: 03/16/21 12:03

Date Received: 03/16/21 16:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00199	U	0.00199		mg/Kg		03/21/21 11:57	03/24/21 03:08	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/21/21 11:57	03/24/21 03:08	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/21/21 11:57	03/24/21 03:08	1
Total BTEX	<0.00199	U	0.00199		mg/Kg		03/21/21 11:57	03/24/21 03:08	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/21/21 11:57	03/24/21 03:08	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/21/21 11:57	03/24/21 03:08	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/21/21 11:57	03/24/21 03:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				03/21/21 11:57	03/24/21 03:08	1
1,4-Difluorobenzene (Surr)	100		70 - 130				03/21/21 11:57	03/24/21 03:08	1
Method: 8015B NM - Diese	I Range Organ	ics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.1	U *+ *1	50.1		mg/Kg		03/18/21 15:13	03/19/21 20:28	1

(GRO)-C6-C10

Eurofins Xenco, Carlsbad

**Matrix: Solid** 

Matrix: Solid

Job ID: 890-371-1 SDG: TE012921019/TE012921007

Lab Sample ID: 890-371-2

#### Client Sample ID: PH01 A Date Collected: 03/16/21 12:03 Date Received: 03/16/21 16:45

Project/Site: PLU 18 BD CTB 161H

Client: WSP USA Inc.

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Diesel Range Organics (Over	<50.1	U	50.1		mg/Kg		03/18/21 15:13	03/19/21 20:28	
C10-C28)					0 0				
Oll Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		03/18/21 15:13	03/19/21 20:28	
Total TPH	<50.1	U	50.1		mg/Kg		03/18/21 15:13	03/19/21 20:28	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	95		70 - 130				03/18/21 15:13	03/19/21 20:28	
o-Terphenyl	95		70 - 130				03/18/21 15:13	03/19/21 20:28	
Method: 300.0 - Anions, Ion C	hromatogra	phy - Solu	ble						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	15.4		4.95		mg/Kg			03/22/21 10:57	
lient Sample ID: PH02							Lab Sam	ple ID: 890	-371-
ate Collected: 03/16/21 10:20								Matrix	c: Soli
ate Received: 03/16/21 16:45									
Method: 8021B - Volatile Orga	nic Compo	unds (GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U	0.00199		mg/Kg		03/21/21 11:57	03/24/21 03:28	
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/21/21 11:57	03/24/21 03:28	
Toluene	<0.00199	U	0.00199		mg/Kg		03/21/21 11:57	03/24/21 03:28	
Total BTEX	<0.00199	U	0.00199		mg/Kg		03/21/21 11:57	03/24/21 03:28	
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/21/21 11:57	03/24/21 03:28	
m-Xylene & p-Xylene	<0.00398		0.00398		mg/Kg			03/24/21 03:28	
p-Xylene	<0.00199		0.00199		mg/Kg			03/24/21 03:28	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
4-Bromofluorobenzene (Surr)	123		70 - 130					03/24/21 03:28	
1,4-Difluorobenzene (Surr)	91		70 - 130					03/24/21 03:28	
Method: 8015B NM - Diesel Ra	ange Organ	ics (DRO) (	(GC)						
Analyte	Result	Qualifier		MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics GRO)-C6-C10	<50.1	U *+ *1	50.1		mg/Kg		03/18/21 15:13	03/19/21 20:49	
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		03/18/21 15:13	03/19/21 20:49	
Oll Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		03/18/21 15:13	03/19/21 20:49	
Total TPH	<50.1	U	50.1		mg/Kg		03/18/21 15:13	03/19/21 20:49	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
I-Chlorooctane	92		70 - 130				03/18/21 15:13	03/19/21 20:49	
p-Terphenyl	87		70 - 130				03/18/21 15:13	03/19/21 20:49	
Method: 300.0 - Anions, Ion C	hromatogra	phy - Solu	ble						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	6.31		4.96		mg/Kg		·	03/22/21 11:02	

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#### **Client Sample Results**

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

#### Client Sample ID: PH02 A Da Da

Lab Sample ID: 890-371-4
SDG: TE012921019/TE012921007

Matrix: Solid

lient Sample ID: PHUZ A	
ate Collected: 03/16/21 12:13	
ate Received: 03/16/21 16:45	

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/24/21 03:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/24/21 03:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/24/21 03:49	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/24/21 03:49	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/21/21 11:57	03/24/21 03:49	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/21/21 11:57	03/24/21 03:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/24/21 03:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130				03/21/21 11:57	03/24/21 03:49	1
1,4-Difluorobenzene (Surr)	103		70 - 130				03/21/21 11:57	03/24/21 03:49	1
Method: 8015B NM - Diesel R	ange Organ	ics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U *+ *1	50.2		mg/Kg		03/18/21 15:13	03/19/21 21:10	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		03/18/21 15:13	03/19/21 21:10	1
Oll Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		03/18/21 15:13	03/19/21 21:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130	03/18/21 15:13 03/19/21 21:10	1
o-Terphenyl	88		70 - 130	03/18/21 15:13 03/19/21 21:10	1

#### Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result C	Qualifier RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.87	4.97	mg/Kg			03/22/21 11:07	1
Client Sample ID: PH03					Lab Sam	ple ID: 890-	371-5

. .....

#### **Client Sample ID: PH03** Date Collected: 03/16/21 10:23

Date Received: 03/16/21 16:45

. . . .

Method: 8021B - Volatile O	rganic Compo	unds (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00198	U	0.00198		mg/Kg		03/21/21 11:57	03/24/21 04:30	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		03/21/21 11:57	03/24/21 04:30	1
Toluene	<0.00198	U	0.00198		mg/Kg		03/21/21 11:57	03/24/21 04:30	1
Total BTEX	<0.00198	U	0.00198		mg/Kg		03/21/21 11:57	03/24/21 04:30	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		03/21/21 11:57	03/24/21 04:30	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		03/21/21 11:57	03/24/21 04:30	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		03/21/21 11:57	03/24/21 04:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130				03/21/21 11:57	03/24/21 04:30	1
1,4-Difluorobenzene (Surr)	102		70 - 130				03/21/21 11:57	03/24/21 04:30	1
_ Method: 8015B NM - Diese	I Range Organ	ics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.8	U *+ *1	49.8		mg/Kg		03/18/21 15:13	03/19/21 21:53	1

(GRO)-C6-C10

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Job ID: 890-371-1

Matrix: Solid

Matrix: Solid

	Job ID: 890-371-1
SDG: TE01292	1019/TE012921007

Lab Sample ID: 890-371-5

#### Client Sample ID: PH03 Date Collected: 03/16/21 10:23 Date Received: 03/16/21 16:45

Project/Site: PLU 18 BD CTB 161H

Client: WSP USA Inc.

Method: 8015B NM - Diesel R					Unit	Б	Branarad	Applyzod	Dil Fac
Analyte		Qualifier	RL	WIDL	Unit	D	Prepared	Analyzed	
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		03/18/21 15:13	03/19/21 21:53	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		03/18/21 15:13	03/19/21 21:53	1
Total TPH	<49.8		49.8		mg/Kg			03/19/21 21:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130				<u> </u>	03/19/21 21:53	1
o-Terphenyl	82		70 - 130				03/18/21 15:13	03/19/21 21:53	1
Method: 300.0 - Anions, Ion C	hromatogra	phy - Solu	ıble						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21.6		5.04		mg/Kg		· · · · · ·	03/22/21 11:12	1
Client Sample ID: PH03 A ate Collected: 03/16/21 12:14 ate Received: 03/16/21 16:45							Lab Sam	ple ID: 890- Matrix	-371-6 : Solic
Method: 8021B - Volatile Orga									
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		03/21/21 11:57	03/24/21 04:50	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		03/21/21 11:57	03/24/21 04:50	1
Toluene	<0.00201	U	0.00201		mg/Kg		03/21/21 11:57	03/24/21 04:50	1
Total BTEX	<0.00201	U	0.00201		mg/Kg		03/21/21 11:57	03/24/21 04:50	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		03/21/21 11:57	03/24/21 04:50	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		03/21/21 11:57	03/24/21 04:50	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		03/21/21 11:57	03/24/21 04:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130				03/21/21 11:57	03/24/21 04:50	1
1,4-Difluorobenzene (Surr)	103		70 - 130				03/21/21 11:57	03/24/21 04:50	1
Method: 8015B NM - Diesel R	ange Organ	ics (DRO)	(GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U *+ *1	50.2		mg/Kg		03/18/21 15:13	03/19/21 22:14	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		03/18/21 15:13	03/19/21 22:14	1
Oll Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		03/18/21 15:13	03/19/21 22:14	1
Total TPH	<50.2		50.2		mg/Kg			03/19/21 22:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130				03/18/21 15:13	03/19/21 22:14	1
o-Terphenyl	77		70 - 130				03/18/21 15:13	03/19/21 22:14	1
Method: 300.0 - Anions, Ion C	hromatogra	phy - Solu	ıble						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

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03/22/21 11:28

Released to Imaging: 7/13/2021 2:49:23 PM

Chloride

5.01

mg/Kg

281

3/28/2021

#### **Client Sample Results**

RL

0.00201

0.00201

0.00201

0.00201

0.00402

0.00402

0.00201

Limits 70 - 130

70 - 130

RL

49.8

49.8

49.8

49.8

Limits

70 - 130

70 - 130

MDL Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

#### **Client Sample ID: PH04** Date Collected: 03/16/21 10:50 Date Received: 03/16/21 16:45

Analyte

Benzene

Toluene

Total BTEX

o-Xylene

Surrogate

Analyte

C10-C28)

Total TPH

Surrogate

o-Terphenyl

1-Chlorooctane

(GRO)-C6-C10

Xylenes, Total

m-Xylene & p-Xylene

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Gasoline Range Organics

**Diesel Range Organics (Over** 

Oll Range Organics (Over C28-C36)

Ethylbenzene

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00201 U

<0.00201 U

<0.00201 U

<0.00201 U

<0.00402 U

<0.00402 U

<0.00201 U

%Recovery Qualifier

113

102

**Result Qualifier** 

<49.8 U \*+ \*1

<49.8 U

<49.8 U

<49.8 U

96

89

Qualifier

%Recovery

	Job ID:
S	DG TE012921019/TE0

Prepared

03/21/21 11:57

03/21/21 11:57 03/24/21 05:11

03/21/21 11:57 03/24/21 05:11

03/21/21 11:57 03/24/21 05:11

03/21/21 11:57 03/24/21 05:11

D

1019/TE012921007

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Dil Fac

1

1

1

1

890-371-1

#### Lab Sample ID: 890-371-7 Matrix: Solid

Analyzed

03/24/21 05:11

	mg/Kg		03/21/21 11:57	03/24/21 05:11	1	8
	mg/Kg		03/21/21 11:57	03/24/21 05:11	1	
			Prepared	Analyzed	Dil Fac	9
			03/21/21 11:57	03/24/21 05:11	1	40
			03/21/21 11:57	03/24/21 05:11	1	10
						11
MDL	Unit	D	Prepared	Analyzed	Dil Fac	_
	mg/Kg		03/18/21 15:13	03/19/21 22:36	1	12
	mg/Kg		03/18/21 15:13	03/19/21 22:36	1	13
	mg/Kg		03/18/21 15:13	03/19/21 22:36	1	_
	mg/Kg		03/18/21 15:13	03/19/21 22:36	1	14
			Prepared	Analyzed	Dil Fac	
			03/18/21 15:13	03/19/21 22:36	1	
			03/18/21 15:13	03/19/21 22:36	1	

#### Method: 300.0 - Anions, Ion Chromatography - Soluble

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

Analyte Chloride	Result 21.0	Qualifier	RL 4.99	MDL	Unit mg/Kg	D	Prepared	Analyzed 03/22/21 11:33	Dil Fac	
Client Sample ID: PH04 A							Lab Sam	ple ID: 890-	371-8	

#### Client Sample ID: PH04 A

Date Collected: 03/16/21 10:52 Date Received: 03/16/21 16:45

Method: 8021B - Volatile O	-								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/24/21 05:31	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/24/21 05:31	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/24/21 05:31	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/24/21 05:31	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		03/21/21 11:57	03/24/21 05:31	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		03/21/21 11:57	03/24/21 05:31	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/24/21 05:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130				03/21/21 11:57	03/24/21 05:31	1
1,4-Difluorobenzene (Surr)	102		70 - 130				03/21/21 11:57	03/24/21 05:31	1
	Range Organ	ics (DRO)	(GC)						
Analyte	· · · ·	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *+ *1	50.0		mg/Kg		03/18/21 15:13	03/19/21 22:57	1

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Matrix: Solid

Job ID: 890-371-1 SDG: TE012921019/TE012921007

Lab Sample ID: 890-371-8

#### Client Sample ID: PH04 A Date Collected: 03/16/21 10:52 Date Received: 03/16/21 16:45

Project/Site: PLU 18 BD CTB 161H

Client: WSP USA Inc.

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		03/18/21 15:13	03/19/21 22:57	
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/18/21 15:13	03/19/21 22:57	
Total TPH	<50.0	U	50.0		mg/Kg		03/18/21 15:13	03/19/21 22:57	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
1-Chlorooctane	98		70 - 130				03/18/21 15:13	03/19/21 22:57	
o-Terphenyl	93		70 - 130				03/18/21 15:13	03/19/21 22:57	
Method: 300.0 - Anions, Ion C	hromatogra	nhy - Solu	ıble						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Chloride	5.41		4.98		mg/Kg	<u> </u>		03/22/21 11:38	
light Sample ID: DH05							Lab Sam	ple ID: 890-	271
lient Sample ID: PH05							Lad Salli		
ate Collected: 03/16/21 13:00								Matrix	: 50
ate Received: 03/16/21 16:45									
Method: 8021B - Volatile Orga	nic Compo	unds (GC)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Benzene	<0.00200	U	0.00200		mg/Kg		03/21/21 14:01	03/24/21 08:34	
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/21/21 14:01	03/24/21 08:34	
Toluene	<0.00200	U	0.00200		mg/Kg		03/21/21 14:01	03/24/21 08:34	
Total BTEX	<0.00200	U	0.00200		mg/Kg		03/21/21 14:01	03/24/21 08:34	
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		03/21/21 14:01	03/24/21 08:34	
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		03/21/21 14:01	03/24/21 08:34	
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/21/21 14:01	03/24/21 08:34	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
4-Bromofluorobenzene (Surr)	112		70 - 130				03/21/21 14:01	03/24/21 08:34	
1,4-Difluorobenzene (Surr)	102		70 - 130				03/21/21 14:01	03/24/21 08:34	
Method: 8015B NM - Diesel Ra	ange Organi	ics (DRO)	(GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Gasoline Range Organics	<49.8	U *+ *1	49.8		mg/Kg		03/18/21 15:13	03/19/21 23:18	
GRO)-C6-C10 Diesel Range Organics (Over	<49.8	U	49.8		mg/Kg		03/18/21 15:13	03/19/21 23:18	
C10-C28)									
Oll Range Organics (Over C28-C36)	<49.8		49.8		mg/Kg			03/19/21 23:18	
Total TPH	<49.8	U	49.8		mg/Kg		03/18/21 15:13	03/19/21 23:18	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
1-Chlorooctane	100		70 - 130				03/18/21 15:13	03/19/21 23:18	
								03/19/21 23:18	

Analyzed

03/22/21 11:43

890-371-1 12921007

5

Matrix: Solid

Analyte

Chloride

RL

5.03

MDL Unit

mg/Kg

D

Prepared

**Result Qualifier** 

14.3

Dil Fac

#### **Client Sample Results**

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

#### **Client Sample ID: PH05 A** Date Collected: 03/16/21 13:02 Date Received: 03/16/21 16:45

Method: 8021B - Volatile Organic Compounds (GC)

 SDG: TE012921019/TE012921007
Lab Sample ID: 890-371-10

Matrix: Solid

Job ID: 890-371-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/21/21 14:01	03/24/21 08:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/21/21 14:01	03/24/21 08:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/21/21 14:01	03/24/21 08:55	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		03/21/21 14:01	03/24/21 08:55	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/21/21 14:01	03/24/21 08:55	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/21/21 14:01	03/24/21 08:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/21/21 14:01	03/24/21 08:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130				03/21/21 14:01	03/24/21 08:55	1
1,4-Difluorobenzene (Surr)	100		70 - 130				03/21/21 14:01	03/24/21 08:55	1
_ Method: 8015B NM - Diesel R	ange Organi	ics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U *+ *1	50.1		mg/Kg		03/18/21 15:13	03/19/21 23:39	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		03/18/21 15:13	03/19/21 23:39	1
Oll Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		03/18/21 15:13	03/19/21 23:39	1
Total TPH	<50.1	U	50.1		mg/Kg		03/18/21 15:13	03/19/21 23:39	1
•		• ····					<b>_</b> .		

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130	03/18/21 15:13	03/19/21 23:39	1
o-Terphenyl	89		70 - 130	03/18/21 15:13	03/19/21 23:39	1

#### Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.38		5.05		mg/Kg			03/22/21 11:49	1
Client Sample ID: PH06							Lab Samp	ole ID: 890-3	71-11

#### **Client Sample ID: PH06**

Date Collected: 03/16/21 12:37 Date Received: 03/16/21 16:45

Method: 8021B - Volatile O	rganic Compo	unds (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		03/21/21 14:01	03/24/21 09:15	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		03/21/21 14:01	03/24/21 09:15	1
Toluene	<0.00202	U	0.00202		mg/Kg		03/21/21 14:01	03/24/21 09:15	1
Total BTEX	<0.00202	U	0.00202		mg/Kg		03/21/21 14:01	03/24/21 09:15	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		03/21/21 14:01	03/24/21 09:15	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		03/21/21 14:01	03/24/21 09:15	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		03/21/21 14:01	03/24/21 09:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				03/21/21 14:01	03/24/21 09:15	1
1,4-Difluorobenzene (Surr)	102		70 - 130				03/21/21 14:01	03/24/21 09:15	1
Method: 8015B NM - Diese	l Range Organ	ics (DRO)	(GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *+ *1	50.0		mg/Kg		03/18/21 15:13	03/20/21 00:00	1

Matrix: Solid

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		Client	Sample I	Resul	ts				
lient: WSP USA Inc. roject/Site: PLU 18 BD CTB 161	Н					S	SDG: TE0129	Job ID: 890 21019/TE012	
lient Sample ID: PH06 ate Collected: 03/16/21 12:37 ate Received: 03/16/21 16:45							Lab Samp	le ID: 890-3 Matrix	
Method: 8015B NM - Diesel Ra Analyte		<mark>ics (DRO)</mark> Qualifier	(GC) (Contin <sub>RL</sub>		Unit	D	Prepared	Analyzed	Dil Fa
Diesel Range Organics (Over	<50.0		50.0		mg/Kg	<u>-</u>	· · · · · · · · · · · · · · · · · · ·	03/20/21 00:00	Dirta
C10-C28)					5 5				
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/18/21 15:13	03/20/21 00:00	
Total TPH	<50.0	U	50.0		mg/Kg		03/18/21 15:13	03/20/21 00:00	
Surrogate	%Recovery	Qualifiar	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctane	100	Quanner	70 - 130					03/20/21 00:00	
p-Terphenyl	99		70 - 130 70 - 130					03/20/21 00:00	
Method: 300.0 - Anions, Ion Ch		· ·	ıble						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	1640		25.2		mg/Kg			03/22/21 11:54	
lient Sample ID: PH06 A							l ah Samn	le ID: 890-3	271_1
ate Collected: 03/16/21 12:38								Matrix	
ate Received: 03/16/21 16:45								Watrix	. 301
Method: 8021B - Volatile Orgai									
Analyte	Result	Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fa
Analyte	<b>Result</b> <0.00201	Qualifier	0.00201	MDL	mg/Kg	<u>D</u>	03/21/21 14:01	03/24/21 09:36	
Analyte Benzene Ethylbenzene	Result <0.00201 <0.00201	Qualifier U U	0.00201	MDL	mg/Kg mg/Kg	<u>D</u>	03/21/21 14:01 03/21/21 14:01	03/24/21 09:36 03/24/21 09:36	
Analyte Benzene Ethylbenzene Toluene	Result <0.00201 <0.00201 <0.00201	Qualifier U U U	0.00201 0.00201 0.00201	MDL	mg/Kg mg/Kg mg/Kg	<u> </u>	03/21/21 14:01 03/21/21 14:01 03/21/21 14:01	03/24/21 09:36 03/24/21 09:36 03/24/21 09:36	
Analyte Benzene Ethylbenzene Toluene	Result           <0.00201	Qualifier U U U U	0.00201	MDL	mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01	03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36	
Analyte Benzene Ethylbenzene Toluene Total BTEX	Result <0.00201 <0.00201 <0.00201	Qualifier U U U U	0.00201 0.00201 0.00201	MDL	mg/Kg mg/Kg mg/Kg	<u>D</u>	03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01	03/24/21 09:36 03/24/21 09:36 03/24/21 09:36	
Analyte Benzene Ethylbenzene Toluene Total BTEX Xylenes, Total m-Xylene & p-Xylene	Result           <0.00201	Qualifier U U U U U U U U	0.00201 0.00201 0.00201 0.00201	MDL	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01	03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36	
Method: 8021B - Volatile Organ Analyte Benzene Ethylbenzene Toluene Total BTEX Xylenes, Total m-Xylene & p-Xylene o-Xylene	Result           <0.00201	Qualifier U U U U U U U U	0.00201 0.00201 0.00201 0.00201 0.00201 0.00402	MDL	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01	03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36	
Analyte Benzene Ethylbenzene Toluene Total BTEX Xylenes, Total m-Xylene & p-Xylene p-Xylene	Result           <0.00201	Qualifier U U U U U U U U U U	0.00201 0.00201 0.00201 0.00201 0.00201 0.00402 0.00402 0.00201	MDL	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01	03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36	
Analyte Benzene Ethylbenzene Foluene Fotal BTEX Kylenes, Total n-Xylene & p-Xylene Xylene	Result           <0.00201	Qualifier U U U U U U U U U U	0.00201 0.00201 0.00201 0.00201 0.00402 0.00402 0.00201 <i>Limits</i>	MDL	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 <b>Prepared</b>	03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 Analyzed	Dil Fa
Analyte         Benzene         Ethylbenzene         Toluene         Total BTEX         Xylenes, Total         m-Xylene & p-Xylene         b-Xylene         Surrogate         4-Bromofluorobenzene (Surr)	Result           <0.00201	Qualifier U U U U U U U U U U	0.00201 0.00201 0.00201 0.00201 0.00402 0.00402 0.00201 <i>Limits</i> 70 - 130	MDL	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 <b>Prepared</b> 03/21/21 14:01	03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 <b>Analyzed</b> 03/24/21 09:36	Dil Fa
Analyte         Benzene         Ethylbenzene         Total BTEX         Xylenes, Total         m-Xylene & p-Xylene         b-Xylene         Surrogate         4-Bromofluorobenzene (Surr)         1,4-Difluorobenzene (Surr)	Result           <0.00201	Qualifier U U U U U U U Qualifier	0.00201 0.00201 0.00201 0.00402 0.00402 0.00201 <i>Limits</i> 70 - 130 70 - 130	MDL	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 <b>Prepared</b> 03/21/21 14:01	03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 Analyzed	Dil Fa
Analyte Benzene Ethylbenzene Toluene Total BTEX Xylenes, Total m-Xylene & p-Xylene p-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: 8015B NM - Diesel Ra	Result           <0.00201	Qualifier U U U U U U U Qualifier	0.00201 0.00201 0.00201 0.00201 0.00402 0.00402 0.00201 <u>Limits</u> 70 - 130 70 - 130 (GC)		mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01	03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36	Dil Fa
Analyte Benzene Ethylbenzene Foluene Fotal BTEX Kylenes, Total m-Xylene & p-Xylene o-Xylene Surrogate A-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: 8015B NM - Diesel Ra Analyte	Result           <0.00201	Qualifier U U U U U U U U Qualifier	0.00201 0.00201 0.00201 0.00201 0.00402 0.00402 0.00201 <u>Limits</u> 70 - 130 70 - 130 (GC) <u>RL</u>		mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	D	03/21/21 14:01 03/21/21 14:01 Prepared	03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36	Dil Fa
Analyte Benzene Ethylbenzene Toluene Total BTEX Kylenes, Total m-Xylene & p-Xylene D-Xylene Surrogate A-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: 8015B NM - Diesel Ra Analyte Basoline Range Organics	Result           <0.00201	Qualifier U U U U U U U Qualifier	0.00201 0.00201 0.00201 0.00201 0.00402 0.00402 0.00201 <u>Limits</u> 70 - 130 70 - 130 (GC)		mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		03/21/21 14:01 03/21/21 14:01 Prepared	03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36	Dil Fa
Analyte Benzene Ethylbenzene Toluene Total BTEX Xylenes, Total m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: 8015B NM - Diesel Ra Analyte Basoline Range Organics GRO)-C6-C10	Result           <0.00201	Qualifier U U U U U U U Qualifier U *+ *1	0.00201 0.00201 0.00201 0.00201 0.00402 0.00402 0.00201 <u>Limits</u> 70 - 130 70 - 130 (GC) <u>RL</u>		mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		03/21/21 14:01 03/21/21 15:13	03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36	Dil Fa Dil Fa
Analyte Benzene Ethylbenzene Toluene Total BTEX Xylenes, Total m-Xylene & p-Xylene o-Xylene Surrogate A-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result           <0.00201	Qualifier U U U U U U U Qualifier U *+ *1	0.00201 0.00201 0.00201 0.00201 0.00402 0.00402 0.00201 Limits 70 - 130 70 - 130 (GC) RL 49.7		mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		03/21/21 14:01 03/21/21 15:13	03/24/21 09:36 03/24/21 09:36	Dil Fa Dil Fa
Analyte Benzene Ethylbenzene Toluene Total BTEX Xylenes, Total m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result           <0.00201	Qualifier           U           U           U           U           U           U           U           U           U           U           U           U           U           Qualifier           U*+*1           U	0.00201 0.00201 0.00201 0.00201 0.00402 0.00402 0.00201 Limits 70 - 130 70 - 130 (GC) RL 49.7		mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		03/21/21 14:01 03/21/21 15:13 03/18/21 15:13	03/24/21 09:36 03/24/21 09:36	Dil Fa
Analyte Benzene Ethylbenzene Foluene Total BTEX Kylenes, Total n-Xylene & p-Xylene Xylene Surrogate I-Bromofluorobenzene (Surr) I, 4-Difluorobenzene (Surr) Method: 8015B NM - Diesel Ra Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36)	Result           <0.00201	Qualifier U U U U U U U U U U U U U U U U U U U	0.00201 0.00201 0.00201 0.00201 0.00402 0.00402 0.00201 Limits 70 - 130 70 - 130 (GC) RL 49.7 49.7		mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		03/21/21 14:01 03/21/21 15:13 03/18/21 15:13	03/24/21 09:36 03/24/21 09:32 03/20/21 00:22	Dil Fa
Analyte Benzene Ethylbenzene Toluene Total BTEX Xylenes, Total m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Total TPH	Result           <0.00201	Qualifier U U U U U U U U U U U U U U U U U U U	0.00201 0.00201 0.00201 0.00201 0.00402 0.00402 0.00201 Limits 70 - 130 70 - 130 (GC) RL 49.7 49.7 49.7		mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		03/21/21 14:01 03/21/21 14:01 03/18/21 15:13 03/18/21 15:13 03/18/21 15:13	03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/24/21 09:36 03/20/21 00:22 03/20/21 00:22 03/20/21 00:22	Dil Fa
Analyte Benzene Ethylbenzene Toluene Total BTEX Xylenes, Total m-Xylene & p-Xylene D-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: 8015B NM - Diesel Ra Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Total TPH Surrogate	Result           <0.00201	Qualifier U U U U U U U U U U U U U U U U U U U	0.00201 0.00201 0.00201 0.00201 0.00402 0.00402 0.00201 Limits 70 - 130 70 - 130 (GC) RL 49.7 49.7 49.7 49.7 49.7 29.7		mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		03/21/21 14:01 03/21/21 15:13 03/18/21 15:13 03/18/21 15:13 03/18/21 15:13 03/18/21 15:13	03/24/21 09:36 03/24/21 09:36 03/20/21 00:22 03/20/21 00:22 03/20/21 00:22 03/20/21 00:22	Dil Fa Dil Fa
Analyte Benzene Ethylbenzene Toluene Total BTEX Xylenes, Total m-Xylene & p-Xylene b-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Total TPH Surrogate 1-Chlorooctane	Result           <0.00201	Qualifier U U U U U U U U U U U U U U U U U U U	0.00201 0.00201 0.00201 0.00201 0.00402 0.00402 0.00201 Limits 70 - 130 70 - 130 (GC) RL 49.7 49.7 49.7 49.7 49.7 <u>Limits</u> 70 - 130		mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/18/21 15:13 03/18/21 15:13 03/18/21 15:13 03/18/21 15:13	03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/20/21 00:22           03/20/21 00:22           03/20/21 00:22           03/20/21 00:22           03/20/21 00:22           03/20/21 00:22	Dil Fa Dil Fa Dil Fa
Analyte Benzene Ethylbenzene Toluene Total BTEX Xylenes, Total m-Xylene & p-Xylene b-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Total TPH Surrogate 1-Chlorooctane	Result           <0.00201	Qualifier U U U U U U U U U U U U U U U U U U U	0.00201 0.00201 0.00201 0.00201 0.00402 0.00402 0.00201 Limits 70 - 130 70 - 130 (GC) RL 49.7 49.7 49.7 49.7 49.7 29.7		mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/18/21 15:13 03/18/21 15:13 03/18/21 15:13 03/18/21 15:13	03/24/21 09:36 03/24/21 09:36 03/20/21 00:22 03/20/21 00:22 03/20/21 00:22 03/20/21 00:22	Dil Fa Dil Fa Dil Fa
Analyte Benzene Ethylbenzene Toluene Total BTEX Xylenes, Total m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: 8015B NM - Diesel Ra Analyte Basoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Total TPH Surrogate 1-Chlorooctane o-Terphenyl	Result           <0.00201	Qualifier           U           U           U           U           U           U           U           U           U           U           U           U           Qualifier           U *+ *1           U	0.00201 0.00201 0.00201 0.00201 0.00402 0.00402 0.00201 <u>Limits</u> 70 - 130 70 - 130 (GC) <u>RL</u> 49.7 49.7 49.7 49.7 <u>Limits</u> 70 - 130 70 - 130 70 - 130 70 - 130		mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/18/21 15:13 03/18/21 15:13 03/18/21 15:13 03/18/21 15:13	03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/20/21 00:22           03/20/21 00:22           03/20/21 00:22           03/20/21 00:22           03/20/21 00:22           03/20/21 00:22	Dil Fa Dil Fa
Analyte Benzene Ethylbenzene Toluene Total BTEX Xylenes, Total m-Xylene & p-Xylene	Result           <0.00201	Qualifier           U           U           U           U           U           U           U           U           U           U           U           U           Qualifier           U *+ *1           U           U           U           U           U           U           U           U           U	0.00201 0.00201 0.00201 0.00201 0.00402 0.00402 0.00201 Limits 70 - 130 70 - 130 (GC) RL 49.7 49.7 49.7 49.7 49.7 19.7 19.7	MDL	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/21/21 14:01 03/18/21 15:13 03/18/21 15:13 03/18/21 15:13 03/18/21 15:13	03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/24/21 09:36           03/20/21 00:22           03/20/21 00:22           03/20/21 00:22           03/20/21 00:22           03/20/21 00:22           03/20/21 00:22	Dil Fac

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Released to Imaging: 7/13/2021 2:49:23 PM

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#### **Client Sample Results**

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

#### Client Sample ID: PH07 Date Collected: 03/16/21 13:12 Date Received: 03/16/21 16:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/26/21 10:34	03/26/21 19:40	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/26/21 10:34	03/26/21 19:40	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/26/21 10:34	03/26/21 19:40	1
Total BTEX	<0.00199	U *1	0.00199		mg/Kg		03/26/21 10:34	03/26/21 19:40	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/26/21 10:34	03/26/21 19:40	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/26/21 10:34	03/26/21 19:40	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/26/21 10:34	03/26/21 19:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	125		70 - 130				03/26/21 10:34	03/26/21 19:40	1

1,4-Difluorobenzene (Surr)

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

106

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.2	U *+ *1	50.2		mg/Kg		03/18/21 15:13	03/20/21 00:43	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.2	U	50.2		mg/Kg		03/18/21 15:13	03/20/21 00:43	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		03/18/21 15:13	03/20/21 00:43	1
Total TPH	<50.2	U	50.2		mg/Kg		03/18/21 15:13	03/20/21 00:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130				03/18/21 15:13	03/20/21 00:43	1
o-Terphenyl	85		70 - 130				03/18/21 15:13	03/20/21 00:43	1

70 - 130

#### Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte Chloride	Result Qualifi	ier RL 4.99	MDL	Unit mg/Kg	<u> </u>	Prepared	Analyzed 03/22/21 12:14	Dil Fac
Client Sample ID: PH07 A						Lab Samp	ole ID: 890-3	71-14

#### Client Sample ID: PH07 A Date Collected: 03/16/21 13:16

Date Received: 03/16/21 16:45

Method: 8021B - Volatile O	rganic Compo	unds (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00199	U	0.00199		mg/Kg		03/26/21 10:34	03/26/21 20:01	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/26/21 10:34	03/26/21 20:01	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/26/21 10:34	03/26/21 20:01	1
Total BTEX	<0.00199	U *1	0.00199		mg/Kg		03/26/21 10:34	03/26/21 20:01	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/26/21 10:34	03/26/21 20:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/26/21 10:34	03/26/21 20:01	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/26/21 10:34	03/26/21 20:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130				03/26/21 10:34	03/26/21 20:01	1
1,4-Difluorobenzene (Surr)	105		70 - 130				03/26/21 10:34	03/26/21 20:01	1
_ Method: 8015B NM - Diese	I Range Organ	ics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U *+ *1	50.0		mg/Kg		03/18/21 15:13	03/20/21 01:04	1

(GRO)-C6-C10

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Job ID: 890-371-1 SDG: TE012921019/TE012921007

### Lab Sample ID: 890-371-13

03/26/21 10:34 03/26/21 19:40

Matrix: Solid

5

**Matrix: Solid** 

RL

50.0

50.0

50.0

RL

4.98

Limits

70 - 130

70 - 130

MDL Unit

MDL Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

D

Prepared

Prepared

Prepared

Dil Fac

Dil Fac

Dil Fac

1

1

1

1

1

Job ID: 890-371-1 SDG: TE012921019/TE012921007

#### **Client Sample ID: PH07 A** Date Collected: 03/16/21 13:16 Date Received: 03/16/21 16:45

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

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

Method: 300.0 - Anions, Ion Chromatography - Soluble

Result Qualifier

<50.0 U

<50.0 U

<50.0 U

%Recovery Qualifier

**Result Qualifier** 

112

107

6.95

Project/Site: PLU 18 BD CTB 161H

Client: WSP USA Inc.

Analyte

C10-C28)

Total TPH

Surrogate

o-Terphenyl

Analyte

Chloride

1-Chlorooctane

03/18/21 15:13 03/20/21 01:04

03/18/21 15:13 03/20/21 01:04

03/18/21 15:13 03/20/21 01:04

03/18/21 15:13 03/20/21 01:04

03/18/21 15:13 03/20/21 01:04

#### Lab Sample ID: 890-371-14 Matrix: Solid

Analyzed

Analyzed

Analyzed

03/22/21 12:30

#### **Surrogate Summary**

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

Lab Sample ID 890-371-1 890-371-2 890-371-3 890-371-4 890-371-5 890-371-6 890-371-7 890-371-8 890-371-9 890-371-10 890-371-11 890-371-12 890-371-13 890-371-14 LCS 880-647/1-A LCS 880-688/1-A LCS 880-902/1-A LCSD 880-647/2-A LCSD 880-688/2-A LCSD 880-902/2-A MB 880-647/5-A MB 880-657/5-A MB 880-688/5-A MB 880-902/5-A

#### Jatil 0 -(0.0) Method: 8021B - V Matrix: Solid

Released to	Imaging:	7/13/2021	2:49:23	РМ	

			Prep Type: Total/NA	
		Percent Surrogate Re	covery (Acceptance Limits)	
	BFB1	DFBZ1		
Client Sample ID	(70-130)	(70-130)		
PH01	111	101		
PH01 A	116	100		
PH02	123	91		
PH02 A	115	103		
PH03	115	102		
PH03 A	120	103		
PH04	113	102		
PH04 A	112	102		
PH05	112	102		
PH05 A	110	100		
PH06	110	102		
PH06 A	116	102		
PH07	125	106		
PH07 A	129	105		
Lab Control Sample	103	101		
Lab Control Sample	102	100		
Lab Control Sample	100	102		
Lab Control Sample Dup	106	99		
Lab Control Sample Dup	104	100		
Lab Control Sample Dup	112	105		
Method Blank	104	95		
Method Blank	104	96		
Method Blank	106	96		

#### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Method Blank

			Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID		
890-371-9 MSD	PH05		
LCSD 880-657/2-A	Lab Control Sample Dup		

98

102

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Percent Surrogate Recovery (Acceptance Limits) 1001 OTPH1 Lab Sample ID **Client Sample ID** (70-130) (70-130) 890-371-1 PH01 84 82 890-371-2 PH01 A 95 95 890-371-3 PH02 92 87

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Prep Type: Total/NA

Prep Type: Total/NA

Client: WSP USA Inc.

#### **Surrogate Summary**

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Job ID: 890-371-1 SDG: TE012921019/TE012921007

#### Project/Site: PLU 18 BD CTB 161H Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued) Matrix: Solid

#### Prep Type: Total/NA

			Pe	rcent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)		
890-371-4	PH02 A	91	88		5
890-371-5	PH03	84	82		6
890-371-6	PH03 A	80	77		6
890-371-7	PH04	96	89		
890-371-8	PH04 A	98	93		
890-371-9	PH05	100	91		
890-371-10	PH05 A	95	89		8
890-371-11	PH06	100	99		
890-371-12	PH06 A	109	107		9
890-371-13	PH07	89	85		
890-371-14	PH07 A	112	107		
LCS 880-569/2-A	Lab Control Sample	113	106		
LCSD 880-569/3-A	Lab Control Sample Dup	115	108		
MB 880-569/1-A	Method Blank	115	119		
Surrogate Legend					
1CO = 1-Chlorooctar	ne				
OTPH = o-Terphenyl					

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

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

Lab Sample ID: MB 880-647/5-A
Matrix: Solid
Analysis Batch: 734

-	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/23/21 21:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/23/21 21:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/23/21 21:39	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/23/21 21:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/21/21 11:57	03/23/21 21:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/21/21 11:57	03/23/21 21:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/21/21 11:57	03/23/21 21:39	1
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130				03/21/21 11:57	03/23/21 21:39	1
1,4-Difluorobenzene (Surr)	95		70 - 130				03/21/21 11:57	03/23/21 21:39	1

#### Lab Sample ID: LCS 880-647/1-A **Matrix: Solid Analysis Batch: 734**

Analysis Batch: 734							Prep I	Batch: 647
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1078		mg/Kg		108	70 - 130	
Ethylbenzene	0.100	0.1113		mg/Kg		111	70 - 130	
Toluene	0.100	0.1095		mg/Kg		109	70 - 130	
m-Xylene & p-Xylene	0.200	0.2271		mg/Kg		114	70 - 130	
o-Xylene	0.100	0.1123		mg/Kg		112	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

#### Lab Sample ID: LCSD 880-647/2-A Matrix: Solid Analysis Batch: 734

Allalysis Daluli. 734							Frep	J Dalci	1.04/
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1046		mg/Kg		105	70 - 130	3	35
Ethylbenzene	0.100	0.1108		mg/Kg		111	70 - 130	0	35
Toluene	0.100	0.1085		mg/Kg		108	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.2274		mg/Kg		114	70 - 130	0	35
o-Xylene	0.100	0.1109		mg/Kg		111	70 - 130	1	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

#### Lab Sample ID: MB 880-657/5-A Matrix: Solid

Analysis Batch: 734								Prep Bato	:h: 657
	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/21/21 14:01	03/24/21 08:06	1

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**Client Sample ID: Method Blank** 

Job ID: 890-371-1 SDG: TE012921019/TE012921007

# **Client Sample ID: Method Blank** Prep Type: Total/NA Prep Batch: 647 5 6 7 8 9

Prep Type: Total/NA

#### **Client Sample ID: Lab Control Sample Dup** Prep Type: Total/NA Prep Batch: 647

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

Job ID: 890-371-1 SDG: TE012921019/TE012921007

**Client Sample ID: Method Blank** 

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

Prep Type: Total/NA

Prep Type: Total/NA

**Client Sample ID: PH05** 

Prep Type: Total/NA

Prep Batch: 657

Prep Batch: 657

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

Lab Sample ID: MB 880-657/5-A	
Matrix: Solid	
Analysis Batch: 734	

-	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/21/21 14:01	03/24/21 08:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/21/21 14:01	03/24/21 08:06	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		03/21/21 14:01	03/24/21 08:06	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/21/21 14:01	03/24/21 08:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/21/21 14:01	03/24/21 08:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/21/21 14:01	03/24/21 08:06	1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130				03/21/21 14:01	03/24/21 08:06	1
1,4-Difluorobenzene (Surr)	96		70 - 130				03/21/21 14:01	03/24/21 08:06	1

#### Lab Sample ID: LCSD 880-657/2-A **Matrix: Solid Analysis Batch: 734**

	Spike	LCSD	LCSD				%Rec.	•	RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.1020		mg/Kg						
Ethylbenzene	0.100	0.1075		mg/Kg						
Toluene	0.100	0.1041		mg/Kg						
m-Xylene & p-Xylene	0.200	0.2194		mg/Kg						
o-Xylene	0.100	0.1088		mg/Kg						

#### LCSD LCSD Surrogate %Recovery Qualifier Limits

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

#### Lab Sample ID: 890-371-9 MSD Matrix: Solid Analysis Batch: 734

Analysis Batch: 734									Pre	p Batcł	n: 657
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	< 0.00200	U	0.0990	0.06879		mg/Kg					
Ethylbenzene	<0.00200	U	0.0990	0.07282		mg/Kg					
Toluene	<0.00200	U	0.0990	0.07117		mg/Kg					
m-Xylene & p-Xylene	<0.00401	U	0.198	0.1518		mg/Kg					
o-Xylene	<0.00200	U	0.0990	0.07632		mg/Kg					

#### Surrogate

%Recovery Qualifier Limits

MSD MSD

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

#### Lab Sample ID: MB 880-688/5-A Matrix: Solid **Analysis Batch: 734**

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200		mg/Kg		03/22/21 11:15	03/23/21 10:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/22/21 11:15	03/23/21 10:39	1

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Prep Type: Total/NA

Prep Batch: 688

**Client Sample ID: Method Blank** 

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H Job ID: 890-371-1 SDG: TE012921019/TE012921007

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

#### Lab Sample ID: MB 880-688/5-A Client S Matrix: Solid Analysis Batch: 734

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.00200	U	0.00200		mg/Kg		03/22/21 11:15	03/23/21 10:39	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		03/22/21 11:15	03/23/21 10:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/22/21 11:15	03/23/21 10:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/22/21 11:15	03/23/21 10:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/22/21 11:15	03/23/21 10:39	1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130				03/22/21 11:15	03/23/21 10:39	1
1,4-Difluorobenzene (Surr)	96		70 - 130				03/22/21 11:15	03/23/21 10:39	1

#### Lab Sample ID: LCS 880-688/1-A Matrix: Solid Analysis Batch: 734

Analysis Daton. 734							FIED Datci	1.000
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1084		mg/Kg		108	70 - 130	
Ethylbenzene	0.100	0.1193		mg/Kg		119	70 - 130	
Toluene	0.100	0.1157		mg/Kg		116	70 - 130	
m-Xylene & p-Xylene	0.200	0.2466		mg/Kg		123	70 - 130	
o-Xylene	0.100	0.1163		mg/Kg		116	70 - 130	

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

#### Lab Sample ID: LCSD 880-688/2-A Matrix: Solid

Analysis Batch: 734						Prep	b Batch	n: 688
	Spike	LCSD LCSD				%Rec.		RPD
Analyte	Added	Result Qualifie	r Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1127	mg/Kg		113	70 - 130	4	35
Ethylbenzene	0.100	0.1217	mg/Kg		122	70 - 130	2	35
Toluene	0.100	0.1184	mg/Kg		118	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2508	mg/Kg		125	70 - 130	2	35
o-Xylene	0.100	0.1193	mg/Kg		119	70 - 130	2	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

#### Lab Sample ID: MB 880-902/5-A Matrix: Solid

#### Analysis Batch: 903

	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/26/21 10:34	03/26/21 13:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/26/21 10:34	03/26/21 13:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/26/21 10:34	03/26/21 13:53	1

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Prep Type: Total/NA

Prep Batch: 902

**Client Sample ID: Method Blank** 

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

Prep Type: Total/NA

5

7

#### Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 688

 
 Prepared
 Analyzed
 Dil Fac

 03/22/21 11:15
 03/23/21 10:39
 1

 03/22/21 11:15
 03/23/21 10:39
 1

 Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 688 %Rec.

 it
 D
 %Rec 108
 Limits 70 - 130
 \_\_\_\_\_\_

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H Job ID: 890-371-1 SDG: TE012921019/TE012921007

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

Lab Sample ID: MB 880-90 Matrix: Solid Analysis Batch: 903	2/5-A						· · · · ·	le ID: Methoo Prep Type: To Prep Bato	otal/NA
-	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00200	U	0.00200		mg/Kg		03/26/21 10:34	03/26/21 13:53	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/26/21 10:34	03/26/21 13:53	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/26/21 10:34	03/26/21 13:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/26/21 10:34	03/26/21 13:53	1
	МВ	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130				03/26/21 10:34	03/26/21 13:53	1
1,4-Difluorobenzene (Surr)	98		70 - 130				03/26/21 10:34	03/26/21 13:53	1
_ Lab Sample ID: LCS 880-90 Matrix: Solid	02/1-A					Clien		Lab Control S Prep Type: To	
Analysis Batch: 903								Prep Bate	

#### Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec Limits Benzene 0.100 0.08298 83 70 - 130 mg/Kg Ethylbenzene 0.100 0.07992 mg/Kg 80 70 - 130 Toluene 0.100 0.07886 mg/Kg 79 70 - 130 m-Xylene & p-Xylene 0.200 mg/Kg 80 0.1601 70 - 130 o-Xylene 0.100 0.08122 mg/Kg 81 70 - 130

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

#### Lab Sample ID: LCSD 880-902/2-A Matrix: Solid

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

Analysis Batch: 903							Prep	o Batch	1: 902
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1044		mg/Kg		104	70 - 130	23	35
Ethylbenzene	0.100	0.1041		mg/Kg		104	70 - 130	26	35
Toluene	0.100	0.09862		mg/Kg		99	70 - 130	22	35
m-Xylene & p-Xylene	0.200	0.2131		mg/Kg		107	70 - 130	28	35
o-Xylene	0.100	0.1119		mg/Kg		112	70 - 130	32	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

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

Lab Sample ID: MB 880-569/1-A Matrix: Solid Analysis Batch: 619								ole ID: Method Prep Type: To Prep Bato	otal/NA
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/18/21 15:13	03/19/21 16:14	1

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Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

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Job ID: 890-371-1 SDG: TE012921019/TE012921007

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

Malysis Batch: 619         MB         MB         MB         ML         Unit         D         Prep Batch: 1         Analyzed         Dill           Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed         Dill           Diesel Range Organics (Over C28-C36)         <60.0         U         50.0         mg/Kg         03/18/21 15:13         03/19/21 16:14         Dill           Colo-C28)         <60.0         U         50.0         mg/Kg         03/18/21 15:13         03/19/21 16:14         Dill           Surrogate         %Recovery         Qualifier         Limits         Prepared         Analyzed         Dill           1-Chorocotane         11/9         70.130         03/18/21 15:13         03/19/21 16:14         Dill           Lab Sample ID: LCS 880-569/2-A         Matrix: Solid         Prep Type: Total         Prep Batch: 1         Prep Batch: 1           Analyte         Added         Result         Qualifier         Unit         D         %Rec         Limits           GRO)-C6-C10         1000         1043         mg/Kg         104         70.130         Prep Type: Total           ChiceC28)         LCS LCS         LCS         LCS <th>Lab Sample ID: MB 880-569 Matrix: Solid</th> <th>9/1-A</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>Clie</th> <th>nt Samp</th> <th>ole ID: Me Prep Typ</th> <th>be: To</th> <th>tal/N/</th>	Lab Sample ID: MB 880-569 Matrix: Solid	9/1-A									Clie	nt Samp	ole ID: Me Prep Typ	be: To	tal/N/
Analyte         Result         Qualifier         RL         MDL         Unit         D         Prepared         Analyzed         Diage           Diesel Range Organics (Over         <50.0         U         50.0         mg/Kg         03/18/21 15:13         03/19/21 16:14         03/19/2	Analysis Batch: 619												Prep	Batc	h: 56
Diesel Range Organics (Over C10-C28)         <50.0			MB	MB											
C10-C28) OII Range Organics (Over C28-C36)       <50.0       U       50.0       mg/Kg       03/18/21 15:13       03/19/21 16:14         Surrogate       %Recovery       Qualifier       Limits       Prepared       Analyzed       Dil         1-Chlorooctane       115       70.130       03/18/21 15:13       03/18/21 15:13       03/18/21 15:13       03/18/21 15:14       Dil         Lab Sample ID: LCS 880-569/2-A       119       70.130       03/18/21 15:13       03/18/21 15:13       03/18/21 15:14       Dil         Lab Sample ID: LCS 880-569/2-A       Client Sample ID: Lab Control Sam       Prep Type: Total         Analysis Batch: 619       Added       Result       Qualifier       Unit       D       %Rec.       MRec.         Analyte       Added       Result       Qualifier       Unit       D       %Rec.       Limits       -         Gasoline Range Organics (Over       1000       1043       mg/Kg       104       70.130       -       -         Surrogate       %Recovery Qualifier       Limits       -	Analyte	Res	sult	Qualifier	RL	I	MDL	Unit		D	Pi	repared	Analyz	ed	Dil Fa
Dil Range Organics (Over C28-C36)         <50.0         U         50.0         mg/Kg         03/18/21 15:13         03/19/21 15:14           Total TPH         <50.0			50.0	U	50.0			mg/K	g	_	03/1	8/21 15:13	03/19/21 1	16:14	
MB     MB     MB       Surrogate     %Recovery     Qualifier     Limits       1-Chlorooctane     115     70 - 130     03/18/21 15:13     03/19/21 16:14       0-Terphenyl     119     70 - 130     03/18/21 15:13     03/19/21 16:14       Lab Sample ID: LCS 880-569/2-A Matrix: Solid     Client Sample ID: Lab Control Sam Prep Type: Total/ Prep Batch: 619       Analysis Batch: 619     Spike     LCS LCS     %Rec.       Analyse     Added     Result Qualifier     Unit     D     %Rec.       Gasoline Range Organics (GVer C10-C28)     1000     1043     mg/Kg     104     70 - 130       LCS LCS     Spike     LCS LCS     Prep Batch: 619     %Rec.     Prep Batch: 619       Surrogate     %Recovery     Qualifier     Limits     70 - 130       1-Chlorooctane     113     70 - 130     70 - 130       Lab Sample ID: LCSD 880-569/3-A Matrix: Solid     Client Sample ID: Lab Control Sample ID       Analyte     Spike     LCSD LCSD     %Rec.       Gasoline Range Organics (Over C10-C28)     1000     1043     mg/Kg     104     70 - 130       Lab Sample ID: LCSD 880-569/3-A Matrix: Solid     Spike     LCSD LCSD     %Rec.     Matrix: Solid       Analysis Batch: 619     1000     1142     1     mg/Kg     <	,	) <5	50.0	U	50.0			mg/K	g		03/1	8/21 15:13	03/19/21 1	16:14	
Surrogate       %Recovery       Qualifier       Limits       Prepared       Analyzed       Dill         1-Chronocotane       115       70.130       03/19/21 15:13       03/19/21 15:14       03/19/21 15:14       Dill         0-Terphenyl       119       70.130       03/18/21 15:13       03/19/21 16:14       Dill         Lab Sample ID: LCS 880-569/2-A       Client Sample ID: Lab Control Sam       Prep Type: Totall         Analysis Batch: 619       Added       Result       Qualifier       Vinit       D       %Rec.         Analyte       Added       Result       Qualifier       Unit       D       %Rec.       Wrec.         Gasoline Range Organics (Over       1000       1043       mg/Kg       104       70.130       Prep Batch: 10         C10-C28)       LCS LCS       LCS       LCS       LCS       Prep Type: Totall         Surrogate       %Recovery       Qualifier       Limits       Prep Type: Totall         1-Chiorooctane       113       70.130       Prep Type: Totall         Analysis Batch: 619       Spike       LCSD       LCSD       Prep Type: Totall         Analysis Batch: 619       1000       1142       11       mg/Kg       114       70.130       24	Total TPH	<5	50.0	U	50.0			mg/K	g		03/1	8/21 15:13	03/19/21 1	16:14	
Lichorooctane         115         70.130         03/18/21 15:13         03/19/21 16:14           o-Terphenyl         119         70.130         03/18/21 15:13         03/19/21 16:14           Lab Sample ID: LCS 880-569/2-A Matrix: Solid Analysis Batch: 619         Client Sample ID: Lab Control Sam Prep Type: Total Prep Batch: 4           Analyte         Added         Result Qualifier         Unit         D         %Rec. LCS         LCS         LCS         LCS         LCS         LCS         LCS         LCS         Prep Batch: 4         %Rec.         Limits         70.130         70			MB	МВ											
be-Terphenyl         119         70.130         03/18/21 15:13         03/19/21 16:14           Lab Sample ID: LCS 880-569/2-A Matrix: Solid Analysis Batch: 619         Client Sample ID: Lab Control Sam Prep Type: Total/ Prep Batch: 619           Analyte Gasoline Range Organics (GRO)-C6-C10         Spike 1000         LCS 1000         LCS 1000         LCS 1000         Client Sample ID: Lab Control Sam Prep Type: Total/ Prep Batch: 619           Surrogate         %Recovery %Recovery         Qualifier 106         Limits 70.130         Matrix: Solid 70.130           Analyte Gasoline Range Organics (GRO)-C6-C10         CS LCS 2000         LCS LCS Qualifier         Limits 70.130         Client Sample ID: Lab Control Sample ID Prep Type: Total/ Prep Batch: 619           Analyte Gasoline Range Organics (GRO)-C6-C10         Matrix: Solid Analysis Batch: 619         LCSD LCSD Spike         LCSD LCSD LCSD         LCSD LCSD %Rec         Matrix 70.130           Spike Analyte Gasoline Range Organics (Over C10-C28)         LCSD LCSD 1000         Matrix Tit         D         %Rec         Matrix Frep Batch: 619           Spike GGRO)-C6-C10         LCSD LCSD 1000         LCSD LCSD 1080         Matrix Tit         D         %Rec         Matrix Tit         Matrix Tit         D         %Rec         Matrix Tit           Spike GGRO)-C6-C10         LCSD LCSD 70.130         LCSD LCSD 70.130         Matrix Tit         D         %Re	Surrogate	%Recov	very	Qualifier	Limits						P	repared	Analyz	ed	Dil Fa
Lab Sample ID: LCS 880-569/2-A Matrix: Solid Analysis Batch: 619       Client Sample ID: Lab Control Sam Prep Type: Total/ Prep Batch: 1 %Rec.         Analysis Batch: 619       Spike Added       Client Sample ID: Lab Control Sam Prep Batch: 1 %Rec.         Analysis Batch: 619       Spike Added       Client Sample ID: Lab Control Sam Prep Batch: 1 %Rec.         GGRO)-C6-C10       1000       1456       •         Diesel Range Organics (Over C10-C28)       1000       1043       mg/Kg       104       70 - 130         Surrogate       %Recovery 1006       Qualifier 70 - 130       Limits 70 - 130       Prep Batch: 1 %Recovery 0ualifier       Prep Type: Total/ Prep Type: Total/ 70 - 130         Lab Sample ID: LCSD 880-569/3-A Matrix: Solid Analysis Batch: 619       Spike Added       Client Sample ID: Lab Control Sample ID %Rec       Prep Batch: 1 %Recovery         CigOr-C6-C10 Desel Range Organics (Over C10-C28)       1000       1142       •       Prep Batch: 1 %Rec         Surrogate       %Recovery %Rec       1000       1180       mg/Kg       108       70 - 130         Surrogate       %Recovery %Recovery       LCSD LCSD       LCSD 1000       1080       mg/Kg       108       70 - 130       4         Surrogate       %Recovery %Recovery       Qualifier 115       Limits 70 - 130       108       108       70 - 130       4	1-Chlorooctane		115		70 - 130						03/1	8/21 15:13	03/19/21	16:14	
Matrix: Solid Analysis Batch: 619     Prep Type: Total/ Prep Batch: 619       Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)     Spike 1000     LCS 1000     LCS 1000     LCS 1456     LCS *+     Unit mg/Kg     D %Rec     %Rec. Limits       Surrogate 1-Chlorooctane o-Terphenyl     %Recovery 113     Qualifier 106     Limits 70.130     70.130     70.130     70.130       Lab Sample ID: LCSD 880-569/3-A Matrix: Solid Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (GRO)-C6-C10     Spike Medded 1000     LCSD 70.130     Spike LCSD 1000     LCSD 70.130     Client Sample ID: Lab Control Sample ID Prep Type: Total/ Prep Batch: 4 %Rec.     Wrec.     Matrix: Prep Batch: 4 %Rec.       Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (GRO)-C6-C10     1000     1080     mg/Kg     108     70.130     4       Surrogate 1-Chlorooctane     LCSD 115     LCSD 70.130     24     %Rec.     Matrix	o-Terphenyl		119		70 - 130						03/1	8/21 15:13	03/19/21	16:14	
Analysis Batch: 619       Prep Batch: 61         Analyte       Added       Result       Qualifier       Unit       D       %Rec.       Limits	Lab Sample ID: LCS 880-56	69/2-A							Cli	ent	Sar	nple ID:	Lab Con	trol Sa	ampl
AnalyteSpikeLCSLCSWRec.Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)10001456**mg/Kg14670.130LCSLCS Surrogate10001043mg/Kg10470.13070.130Choroctane O-Terphenyl11370.13070.13070.13070.130Lab Sample ID: LCSD 880-569/3-A Matrix: Solid AnalyteSpike AddedLCSD TotaliLCSD TotaliClient Sample ID: Lab Prep Type: Totali Prep Batch: 619Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)Spike AddedLCSD TotaliLCSD TotaliLCSD TotaliAnalyte Clo-C28)LCSD Matrix: Solid AnalyteSpike AddedLCSD ResultLCSD TotaliLCSD TotaliLCSD TotaliAnalyte Clo-C28)LCSD Matrix: Solid AnalyteLCSD TotaliLCSD TotaliLCSD TotaliLCSD TotaliLCSD TotaliAnalyte Clo-C28)LCSD Matrix: Solid TotaliLCSD Totali	Matrix: Solid														
AnalyteAddedResultQualifierUnitD%RecLimitsGasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)10001043mg/Kg10470.130LCS LCS2LCS Matrix: Solid AnalyteLCSD<	Analysis Batch: 619												Prep	Batc	h: 56
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)         1000         1456         *+         mg/Kg         146         70 - 130           Surrogate         1000         1043         mg/Kg         104         70 - 130           C10-C28)         LCS         LCS         Surrogate         1000         1043         mg/Kg         104         70 - 130           C10-C28)         LCS         LCS         Limits         70 - 130         70 - 130         70 - 130           Lab Sample ID: LCSD 880-569/3-A         106         70 - 130         Client Sample ID: Lab Control Sample D         Prep Type: Total/ Prep Type: Total/ Prep Batch: 4           Analysis Batch: 619         Spike         LCSD         LCSD         LCSD         WRec.         WRec.         WRec.           G(GRO)-C6-C10         1000         1000         1080         mg/Kg         108         70 - 130         24           Diesel Range Organics (Over C10-C28)         LCSD         LCSD         LCSD         Matrix: Solid         Mag(Kg)         108         70 - 130         4           Surrogate         KRecovery         Qualifier         Limits         70 - 130         4         70 - 130         4					Spike	LCS	LCS	;					%Rec.		
Index in the first of the fir	Analyte				Added	Result	Qua	lifier	Unit		D	%Rec	Limits		
Diesel Range Organics (Over C10-C28)       1000       1043       mg/Kg       104       70 - 130         LCS       LCS <thlcs< th="">       LCS       LCS       <t< td=""><td></td><td></td><td></td><td></td><td>1000</td><td>1456</td><td>*+</td><td></td><td>mg/Kg</td><td></td><td></td><td>146</td><td>70 - 130</td><td></td><td></td></t<></thlcs<>					1000	1456	*+		mg/Kg			146	70 - 130		
C10-C28)       LCS       LCS       LCS       LCS         Surrogate       %Recovery       Qualifier       Limits         1-Chlorooctane       113       70 - 130         o-Terphenyl       106       70 - 130         Lab Sample ID: LCSD 880-569/3-A       Client Sample ID: Lab Control Sample ID         Matrix: Solid       Prep Type: Total/         Analyte       Spike       LCSD         Gasoline Range Organics (Over C10-C28)       1000       1080       mg/Kg       108       70 - 130       4         LCSD       LCSD       LCSD       LCSD       1000       1080       mg/Kg       108       70 - 130       4	· · ·				1000	40.40			114			404	70 400		
Surrogate 1-Chlorooctane o-Terphenyl%Recovery 113Qualifier 70 - 130Limits 70 - 130Lab Sample ID: LCSD 880-569/3-A Matrix: Solid Analysis Batch: 619Client Sample ID: Lab Control Sample ID Prep Type: Total/ Prep Batch: 4Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)Spike Analytic LCSD 1000LCSD 1080Client Sample ID: Lab Control Sample ID Prep Type: Total/ Prep Batch: 4LCSD Surrogate 1-ChlorooctaneMatrix: Solid Matrix: Solid Analyte Matrix: Solid Analyte Matrix: Solid Analyte Gasoline Range Organics (Over T15Spike Added T000LCSD T000Unit T080D mg/Kg%Rec T14FPD T0. 130L T0. 130L T0. 130A T0. 130L CDSurrogate 1-Chlorooctane%Recovery T15Limits T0. 130T0. 130A T0. 130L T0. 130	<b>3 3 1</b>				1000	1043			mg/Kg			104	70-130		
1-Chlorooctane       113       70 - 130         o-Terphenyl       106       70 - 130         Lab Sample ID: LCSD 880-569/3-A       Client Sample ID: Lab Control Sample ID         Matrix: Solid       Prep Type: Total/         Analysis Batch: 619       Spike       LCSD         Analyte       Added       Result       Qualifier       Unit       D       %Rec.       Matrix:         Gasoline Range Organics (Gver       1000       1000       1142       *1       mg/Kg       108       70 - 130       24         Cliesel Range Organics (Over       1000       1080       mg/Kg       108       70 - 130       4         Surrogate       %Recovery       Qualifier       Limits       70 - 130       4	_														
Do-Terphenyl       106       70 - 130         Lab Sample ID: LCSD 880-569/3-A       Client Sample ID: Lab Control Sample ID: LCSD Keet ID: LCSD ID: LC			Qua	lifier											
Lab Sample ID: LCSD 880-569/3-A Matrix: Solid Analysis Batch: 619Client Sample ID: Lab Control Sample ID Prep Type: Total/ Prep Batch: 619Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)Spike Added 1000LCSD 1000LCSD 1080Mait mg/KgD mg/Kg%Rec. 114RPD 70 - 130L 24Surrogate 1-Chlorooctane%Recovery 115Qualifier 70 - 130Limits 70 - 130P 24															
Matrix: Solid Analysis Batch: 619Prep Type: Total Prep Batch: 619Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)Spike AddedLCSD Result Qualifier 1000Unit mg/KgD %Rec 114%Rec Limits RPD 114L RPD L C10-C28)LCSD Surrogate 1-ChlorooctaneLCSD 	o-Terphenyl	106			70 - 130										
Analysis Batch: 619       Prep Batch: 6         Analyte       Spike       LCSD       LCSD       %Rec.       Maint		569/3-A						C	lient S	Sam	ple	ID: Lab			
AnalyteAddedResultQualifierUnitD%Rec.ImitsGasoline Range Organics (GRO)-C6-C1010001142*1mg/Kg11470 - 13024Diesel Range Organics (Over C10-C28)10001080mg/Kg10870 - 1304LCSD LCSDLCSD MRecoveryLCSD QualifierLimits T0 - 13070 - 1304															
AnalyteAddedResultQualifierUnitD%RecLimitsRPDLGasoline Range Organics (GRO)-C6-C100001142*1mg/Kg11470 - 13024Diesel Range Organics (Over C10-C28)10001080mg/Kg10870 - 1304LCSD 1-ChlorooctaneLCSD 115Limits 70 - 13070 - 1304	Analysis Batch: 619				Snike		1.00							Batc	n: 56 RP
Gasoline Range Organics         1000         1142         *1         mg/Kg         114         70 - 130         24           (GRO)-C6-C10         Diesel Range Organics (Over         1000         1080         mg/Kg         108         70 - 130         24           C10-C28)         LCSD         LCSD         LCSD         Surrogate         %Recovery         Qualifier         Limits           1-Chlorooctane         115         70 - 130         70 - 130         70 - 130	Analyta					-			11		-	0/ <b>D</b> aa		000	
(GRO)-C6-C10 Diesel Range Organics (Over 1000 1080 mg/Kg 108 70 - 130 4 C10-C28) LCSD LCSD Surrogate <u>%Recovery Qualifier Limits</u> 1-Chlorooctane <u>70 - 130</u>	•							inner			<u> </u>				Lim 2
Diesel Range Organics (Over         1000         1080         mg/Kg         108         70 - 130         4           C10-C28)         LCSD         LCSD         LCSD         Surrogate         %Recovery         Qualifier         Limits         100         100         1080         108         70 - 130         4           1-Chlorooctane         115         70 - 130         70 - 130         4         100         1080         108         70 - 130         4	5 5				1000	1142	I		ing/ng			114	10-130	24	2
C10-C28) LCSD LCSD Surrogate <u>%Recovery Qualifier</u> Limits 1-Chlorooctane <u>70 - 130</u>					1000	1080			mg/Ka			108	70 - 130	4	2
Surrogate%RecoveryQualifierLimits1-Chlorooctane11570 - 130	<b>o o</b> (								0						
1-Chlorooctane 115 70 - 130		LCSD	LCS	SD											
	Surrogate	%Recovery	Qua	lifier	Limits										
o-Ternhenyl 108 70 130	1-Chlorooctane	115			70-130										
	o-Terphenyl	108			70 - 130										

Lab Sample ID: MB 880-644/1-A Matrix: Solid							Client Sam	ple ID: Method Prep Type: S	
Analysis Batch: 672	мр	мр							
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.463	U	0.463		mg/Kg			03/22/21 10:26	1

Eurofins Xenco, Carlsbad

Released to Imaging: 7/13/2021 2:49:23 PM

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H Job ID: 890-371-1 SDG: TE012921019/TE012921007

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880- Matrix: Solid	-644/2-A					Clier	nt Sar	nple ID	: Lab Cor Prep T		
Analysis Batch: 672											
			Spike	LCS	LCS				%Rec.		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			250	253.2		mg/Kg		101	90 - 110		
Lab Sample ID: LCSD 88	0-644/3-A				c	lient Sa	mple	ID: Lat	o Control	Sample	e Dup
Matrix: Solid									Prep T	ype: So	oluble
Analysis Batch: 672											
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	255.2		mg/Kg		102	90 - 110	1	20
Lab Sample ID: 890-371-	1 MS							C	lient Sam	ple ID:	PH01
Matrix: Solid									Prep T	ype: So	oluble
Analysis Batch: 672											
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	38.2		250	300.9		mg/Kg		105	90 - 110		
Lab Sample ID: 890-371-	1 MSD							С	lient Sam	ple ID:	PH01
Matrix: Solid									Prep T		
Analysis Batch: 672										,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	•	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	38.2		250	300.7		mg/Kg		105	90 - 110	0	20
Lab Sample ID: 890-371-	11 MS							С	lient Sam	ple ID:	PH06
Matrix: Solid									Prep T	-	
Analysis Batch: 672										,	
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	-	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	1640		252	2943	4	mg/Kg		516	90 - 110		
Lab Sample ID: 890-371-	11 MSD							С	lient Sam	ple ID:	PH06
Matrix: Solid									Prep T	-	
Analysis Batch: 672										,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	•	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	1640		252	3045		mg/Kg		557	90 - 110	3	20
	1040		202	00-0	r	mgning		001	00-110	5	20

#### **QC Association Summary**

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H Job ID: 890-371-1 SDG: TE012921019/TE012921007

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#### GC VOA Prep Batch: 647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-371-1	PH01	Total/NA	Solid	5035	
890-371-2	PH01 A	Total/NA	Solid	5035	
890-371-3	PH02	Total/NA	Solid	5035	
890-371-4	PH02 A	Total/NA	Solid	5035	
890-371-5	PH03	Total/NA	Solid	5035	
890-371-6	PH03 A	Total/NA	Solid	5035	
890-371-7	PH04	Total/NA	Solid	5035	
890-371-8	PH04 A	Total/NA	Solid	5035	
MB 880-647/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-647/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-647/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

#### Prep Batch: 657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-371-9	PH05	Total/NA	Solid	5035		
890-371-10	PH05 A	Total/NA	Solid	5035		
890-371-11	PH06	Total/NA	Solid	5035		
890-371-12	PH06 A	Total/NA	Solid	5035		
MB 880-657/5-A	Method Blank	Total/NA	Solid	5035		
LCSD 880-657/2-A	Lab Control Sample Dup	Total/NA	Solid	5035		
890-371-9 MSD	PH05	Total/NA	Solid	5035		

#### Prep Batch: 688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-688/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-688/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-688/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

#### Analysis Batch: 734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-371-1	PH01	Total/NA	Solid	8021B	647
890-371-2	PH01 A	Total/NA	Solid	8021B	647
890-371-3	PH02	Total/NA	Solid	8021B	647
890-371-4	PH02 A	Total/NA	Solid	8021B	647
890-371-5	PH03	Total/NA	Solid	8021B	647
890-371-6	PH03 A	Total/NA	Solid	8021B	647
890-371-7	PH04	Total/NA	Solid	8021B	647
890-371-8	PH04 A	Total/NA	Solid	8021B	647
890-371-9	PH05	Total/NA	Solid	8021B	657
890-371-10	PH05 A	Total/NA	Solid	8021B	657
890-371-11	PH06	Total/NA	Solid	8021B	657
890-371-12	PH06 A	Total/NA	Solid	8021B	657
MB 880-647/5-A	Method Blank	Total/NA	Solid	8021B	647
MB 880-657/5-A	Method Blank	Total/NA	Solid	8021B	657
MB 880-688/5-A	Method Blank	Total/NA	Solid	8021B	688
LCS 880-647/1-A	Lab Control Sample	Total/NA	Solid	8021B	647
LCS 880-688/1-A	Lab Control Sample	Total/NA	Solid	8021B	688
LCSD 880-647/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	647
LCSD 880-657/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	657
LCSD 880-688/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	688
890-371-9 MSD	PH05	Total/NA	Solid	8021B	657

#### **QC** Association Summary

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

#### GC VOA

#### Prep Batch: 902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-371-13	PH07	Total/NA	Solid	5035	
890-371-14	PH07 A	Total/NA	Solid	5035	
MB 880-902/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-902/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-902/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
Analysis Batch: 903	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-371-13	PH07	Total/NA	Solid	8021B	902
890-371-14	PH07 A	Total/NA	Solid	8021B	902
MB 880-902/5-A	Method Blank	Total/NA	Solid	8021B	902
LCS 880-902/1-A	Lab Control Sample	Total/NA	Solid	8021B	902

Total/NA

Solid

8021B

# LCSD 880-902/2-A

Lab Control Sample Dup

#### Prep Batch: 569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Bate
890-371-1	PH01	Total/NA	Solid	8015NM Prep
890-371-2	PH01 A	Total/NA	Solid	8015NM Prep
890-371-3	PH02	Total/NA	Solid	8015NM Prep
890-371-4	PH02 A	Total/NA	Solid	8015NM Prep
890-371-5	PH03	Total/NA	Solid	8015NM Prep
890-371-6	PH03 A	Total/NA	Solid	8015NM Prep
890-371-7	PH04	Total/NA	Solid	8015NM Prep
890-371-8	PH04 A	Total/NA	Solid	8015NM Prep
890-371-9	PH05	Total/NA	Solid	8015NM Prep
890-371-10	PH05 A	Total/NA	Solid	8015NM Prep
890-371-11	PH06	Total/NA	Solid	8015NM Prep
890-371-12	PH06 A	Total/NA	Solid	8015NM Prep
890-371-13	PH07	Total/NA	Solid	8015NM Prep
890-371-14	PH07 A	Total/NA	Solid	8015NM Prep
MB 880-569/1-A	Method Blank	Total/NA	Solid	8015NM Prep
LCS 880-569/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep
LCSD 880-569/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep

#### Analysis Batch: 619

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-371-1	PH01	Total/NA	Solid	8015B NM	569
890-371-2	PH01 A	Total/NA	Solid	8015B NM	569
890-371-3	PH02	Total/NA	Solid	8015B NM	569
890-371-4	PH02 A	Total/NA	Solid	8015B NM	569
890-371-5	PH03	Total/NA	Solid	8015B NM	569
890-371-6	PH03 A	Total/NA	Solid	8015B NM	569
890-371-7	PH04	Total/NA	Solid	8015B NM	569
890-371-8	PH04 A	Total/NA	Solid	8015B NM	569
890-371-9	PH05	Total/NA	Solid	8015B NM	569
890-371-10	PH05 A	Total/NA	Solid	8015B NM	569
890-371-11	PH06	Total/NA	Solid	8015B NM	569
890-371-12	PH06 A	Total/NA	Solid	8015B NM	569
890-371-13	PH07	Total/NA	Solid	8015B NM	569

#### Eurofins Xenco, Carlsbad

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#### **QC Association Summary**

Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

#### GC Semi VOA (Continued)

#### **Analysis Batch: 619 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-371-14	PH07 A	Total/NA	Solid	8015B NM	569
MB 880-569/1-A	Method Blank	Total/NA	Solid	8015B NM	569
LCS 880-569/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	569
LCSD 880-569/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	569

#### HPLC/IC

#### Leach Batch: 644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-371-1	PH01	Soluble	Solid	DI Leach	
890-371-2	PH01 A	Soluble	Solid	DI Leach	
890-371-3	PH02	Soluble	Solid	DI Leach	
890-371-4	PH02 A	Soluble	Solid	DI Leach	
890-371-5	PH03	Soluble	Solid	DI Leach	
890-371-6	PH03 A	Soluble	Solid	DI Leach	
890-371-7	PH04	Soluble	Solid	DI Leach	
890-371-8	PH04 A	Soluble	Solid	DI Leach	
890-371-9	PH05	Soluble	Solid	DI Leach	
890-371-10	PH05 A	Soluble	Solid	DI Leach	
890-371-11	PH06	Soluble	Solid	DI Leach	
890-371-12	PH06 A	Soluble	Solid	DI Leach	
890-371-13	PH07	Soluble	Solid	DI Leach	
890-371-14	PH07 A	Soluble	Solid	DI Leach	
MB 880-644/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-644/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-644/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-371-1 MS	PH01	Soluble	Solid	DI Leach	
890-371-1 MSD	PH01	Soluble	Solid	DI Leach	
890-371-11 MS	PH06	Soluble	Solid	DI Leach	
890-371-11 MSD	PH06	Soluble	Solid	DI Leach	

#### Analysis Batch: 672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-371-1	PH01	Soluble	Solid	300.0	644
890-371-2	PH01 A	Soluble	Solid	300.0	644
890-371-3	PH02	Soluble	Solid	300.0	644
890-371-4	PH02 A	Soluble	Solid	300.0	644
890-371-5	PH03	Soluble	Solid	300.0	644
890-371-6	PH03 A	Soluble	Solid	300.0	644
890-371-7	PH04	Soluble	Solid	300.0	644
890-371-8	PH04 A	Soluble	Solid	300.0	644
890-371-9	PH05	Soluble	Solid	300.0	644
890-371-10	PH05 A	Soluble	Solid	300.0	644
890-371-11	PH06	Soluble	Solid	300.0	644
890-371-12	PH06 A	Soluble	Solid	300.0	644
890-371-13	PH07	Soluble	Solid	300.0	644
890-371-14	PH07 A	Soluble	Solid	300.0	644
MB 880-644/1-A	Method Blank	Soluble	Solid	300.0	644
LCS 880-644/2-A	Lab Control Sample	Soluble	Solid	300.0	644
LCSD 880-644/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	644
890-371-1 MS	PH01	Soluble	Solid	300.0	644

#### Eurofins Xenco, Carlsbad

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Job ID: 890-371-1 SDG: TE012921019/TE012921007

Job ID: 890-371-1 SDG: TE012921019/TE012921007

#### HPLC/IC (Continued)

#### **Analysis Batch: 672 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-371-1 MSD	PH01	Soluble	Solid	300.0	644
890-371-11 MS	PH06	Soluble	Solid	300.0	644
890-371-11 MSD	PH06	Soluble	Solid	300.0	644

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Matrix: Solid

Job ID: 890-371-1 SDG: TE012921019/TE012921007

#### Lab Sample ID: 890-371-1 Matrix: Solid

Date Collected: 03/16/21 10:06 Date Received: 03/16/21 16:45

**Client Sample ID: PH01** 

Client: WSP USA Inc.

		Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			647	03/21/21 11:57	MR	XM
Total/NA	Analysis	8021B		1	734	03/24/21 02:48	MR	XM
Total/NA	Prep	8015NM Prep			569	03/18/21 15:13	DM	ХМ
Total/NA	Analysis	8015B NM		1	619	03/19/21 20:07	AM	XM
Soluble	Leach	DI Leach			644	03/21/21 11:10	AJ	ХМ
Soluble	Analysis	300.0		1	672	03/22/21 10:41	СН	XM

#### Client Sample ID: PH01 A Date Collected: 03/16/21 12:03 Date Received: 03/16/21 16:45

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			647	03/21/21 11:57	MR	XM
Total/NA	Analysis	8021B		1	734	03/24/21 03:08	MR	XM
Total/NA	Prep	8015NM Prep			569	03/18/21 15:13	DM	XM
Total/NA	Analysis	8015B NM		1	619	03/19/21 20:28	AM	XM
Soluble	Leach	DI Leach			644	03/21/21 11:10	AJ	XM
Soluble	Analysis	300.0		1	672	03/22/21 10:57	СН	XM

#### Client Sample ID: PH02 Date Collected: 03/16/21 10:20 Date Received: 03/16/21 16:45

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			647	03/21/21 11:57	MR	XM
Total/NA	Analysis	8021B		1	734	03/24/21 03:28	MR	XM
Total/NA	Prep	8015NM Prep			569	03/18/21 15:13	DM	XM
Total/NA	Analysis	8015B NM		1	619	03/19/21 20:49	AM	XM
Soluble	Leach	DI Leach			644	03/21/21 11:10	AJ	XM
Soluble	Analysis	300.0		1	672	03/22/21 11:02	СН	XM

#### Client Sample ID: PH02 A Date Collected: 03/16/21 12:13 Date Received: 03/16/21 16:45

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			647	03/21/21 11:57	MR	XM
Total/NA	Analysis	8021B		1	734	03/24/21 03:49	MR	XM
Total/NA	Prep	8015NM Prep			569	03/18/21 15:13	DM	XM
Total/NA	Analysis	8015B NM		1	619	03/19/21 21:10	AM	XM
Soluble	Leach	DI Leach			644	03/21/21 11:10	AJ	XM
Soluble	Analysis	300.0		1	672	03/22/21 11:07	СН	XM

Lab Sample ID: 890-371-3 Matrix: Solid

×M Lab Sample ID: 890-371-4

Matrix: Solid

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#### Lab Chronicle

Job ID: 890-371-1 SDG: TE012921019/TE012921007

#### Lab Sample ID: 890-371-5 Matrix: Solid

Lab Sample ID: 890-371-7

Lab Sample ID: 890-371-8

Date Collected: 03/16/21 10:23 Date Received: 03/16/21 16:45

**Client Sample ID: PH03** 

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			647	03/21/21 11:57	MR	XM
Total/NA	Analysis	8021B		1	734	03/24/21 04:30	MR	XM
Total/NA	Prep	8015NM Prep			569	03/18/21 15:13	DM	XM
Total/NA	Analysis	8015B NM		1	619	03/19/21 21:53	AM	XM
Soluble	Leach	DI Leach			644	03/21/21 11:10	AJ	XM
Soluble	Analysis	300.0		1	672	03/22/21 11:12	СН	XM
lient Sam	ple ID: PH	)3 A					La	b Sample ID: 890-371

#### Client Sample ID: PH03 A Date Collected: 03/16/21 12:14 Date Received: 03/16/21 16:45

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			647	03/21/21 11:57	MR	XM
Total/NA	Analysis	8021B		1	734	03/24/21 04:50	MR	XM
Total/NA	Prep	8015NM Prep			569	03/18/21 15:13	DM	XM
Total/NA	Analysis	8015B NM		1	619	03/19/21 22:14	AM	XM
Soluble	Leach	DI Leach			644	03/21/21 11:10	AJ	XM
Soluble	Analysis	300.0		1	672	03/22/21 11:28	СН	XM

#### Client Sample ID: PH04 Date Collected: 03/16/21 10:50 Date Received: 03/16/21 16:45

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			647	03/21/21 11:57	MR	XM
Total/NA	Analysis	8021B		1	734	03/24/21 05:11	MR	XM
Total/NA	Prep	8015NM Prep			569	03/18/21 15:13	DM	XM
Total/NA	Analysis	8015B NM		1	619	03/19/21 22:36	AM	XM
Soluble	Leach	DI Leach			644	03/21/21 11:10	AJ	XM
Soluble	Analysis	300.0		1	672	03/22/21 11:33	СН	XM

#### Client Sample ID: PH04 A Date Collected: 03/16/21 10:52 Date Received: 03/16/21 16:45

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			647	03/21/21 11:57	MR	XM
Total/NA	Analysis	8021B		1	734	03/24/21 05:31	MR	XM
Total/NA	Prep	8015NM Prep			569	03/18/21 15:13	DM	XM
Total/NA	Analysis	8015B NM		1	619	03/19/21 22:57	AM	XM
Soluble	Leach	DI Leach			644	03/21/21 11:10	AJ	XM
Soluble	Analysis	300.0		1	672	03/22/21 11:38	СН	XM

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Matrix: Solid

**Matrix: Solid** 

Matrix: Solid

#### Lab Chronicle

Job ID: 890-371-1 SDG: TE012921019/TE012921007

#### Lab Sample ID: 890-371-9 Matrix: Solid

Date Collected: 03/16/21 13:00 Date Received: 03/16/21 16:45

**Client Sample ID: PH05** 

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			657	03/21/21 14:01	MR	XM
Total/NA	Analysis	8021B		1	734	03/24/21 08:34	MR	XM
Total/NA	Prep	8015NM Prep			569	03/18/21 15:13	DM	XM
Total/NA	Analysis	8015B NM		1	619	03/19/21 23:18	AM	XM
Soluble	Leach	DI Leach			644	03/21/21 11:10	AJ	XM
Soluble	Analysis	300.0		1	672	03/22/21 11:43	СН	XM

#### Client Sample ID: PH05 A Date Collected: 03/16/21 13:02 Date Received: 03/16/21 16:45

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			657	03/21/21 14:01	MR	XM
Total/NA	Analysis	8021B		1	734	03/24/21 08:55	MR	XM
Total/NA	Prep	8015NM Prep			569	03/18/21 15:13	DM	XM
Total/NA	Analysis	8015B NM		1	619	03/19/21 23:39	AM	XM
Soluble	Leach	DI Leach			644	03/21/21 11:10	AJ	XM
Soluble	Analysis	300.0		1	672	03/22/21 11:49	СН	XM

#### Client Sample ID: PH06 Date Collected: 03/16/21 12:37 Date Received: 03/16/21 16:45

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			657	03/21/21 14:01	MR	XM
Total/NA	Analysis	8021B		1	734	03/24/21 09:15	MR	XM
Total/NA	Prep	8015NM Prep			569	03/18/21 15:13	DM	XM
Total/NA	Analysis	8015B NM		1	619	03/20/21 00:00	AM	XM
Soluble	Leach	DI Leach			644	03/21/21 11:10	AJ	XM
Soluble	Analysis	300.0		5	672	03/22/21 11:54	СН	XM

#### Client Sample ID: PH06 A Date Collected: 03/16/21 12:38 Date Received: 03/16/21 16:45

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			657	03/21/21 14:01	MR	XM
Total/NA	Analysis	8021B		1	734	03/24/21 09:36	MR	XM
Total/NA	Prep	8015NM Prep			569	03/18/21 15:13	DM	XM
Total/NA	Analysis	8015B NM		1	619	03/20/21 00:22	AM	XM
Soluble	Leach	DI Leach			644	03/21/21 11:10	AJ	XM
Soluble	Analysis	300.0		1	672	03/22/21 12:09	СН	XM

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012921007

Matrix: Solid

#### Lab Sample ID: 890-371-11 Matrix: Solid

Lab Sample ID: 890-371-12

Matrix: Solid

3/28/2021

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Matrix: Solid

#### Lab Chronicle

Job ID: 890-371-1 SDG: TE012921019/TE012921007

#### Lab Sample ID: 890-371-13 Matrix: Solid

Client Sample ID: PH07 Date Collected: 03/16/21 13:12 Date Received: 03/16/21 16:45

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			902	03/26/21 10:34	KL	XM
Total/NA	Analysis	8021B		1	903	03/26/21 19:40	KL	XM
Total/NA	Prep	8015NM Prep			569	03/18/21 15:13	DM	XM
Total/NA	Analysis	8015B NM		1	619	03/20/21 00:43	AM	XM
Soluble	Leach	DI Leach			644	03/21/21 11:10	AJ	XM
Soluble	Analysis	300.0		1	672	03/22/21 12:14	СН	XM
- Client Sam	ple ID: PHC	)7 A					Lab	Sample ID: 890-371-1

#### Client Sample ID: PH07 A Date Collected: 03/16/21 13:16 Date Received: 03/16/21 16:45

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			902	03/26/21 10:34	KL	XM
Total/NA	Analysis	8021B		1	903	03/26/21 20:01	KL	XM
Total/NA	Prep	8015NM Prep			569	03/18/21 15:13	DM	XM
Total/NA	Analysis	8015B NM		1	619	03/20/21 01:04	AM	XM
Soluble	Leach	DI Leach			644	03/21/21 11:10	AJ	XM
Soluble	Analysis	300.0		1	672	03/22/21 12:30	СН	XM

#### Laboratory References:

XM = 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. Project/Site: PLU 18 BD CTB 161H Job ID: 890-371-1 SDG: TE012921019/TE012921007

#### 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
exas	NE	ELAP	T104704400-20-21	06-30-21
The following analytes	s are included in this repo	ort but the laboratory is r	not certified by the governing authority.	This list may include analytes for which
the agency does not c	•		iot certilied by the governing autionty.	
	•	Matrix	Analyte	
the agency does not c	offer certification.			

Eurofins Xenco, Carlsbad

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#### Job ID: 890-371-1 SDG: TE012921019/TE012921007

Method	Method Description	Protocol	Laborator
8021B	Volatile Organic Compounds (GC)	SW846	XM
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XM
300.0	Anions, Ion Chromatography	MCAWW	XM
5035	Closed System Purge and Trap	SW846	XM
015NM Prep	Microextraction	SW846	XM
OI Leach	Deionized Water Leaching Procedure	ASTM	XM

#### **Protocol References:**

Client: WSP USA Inc.

ASTM = ASTM International

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

#### Laboratory References:

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

#### **Sample Summary**

#### Job ID: 890-371-1 SDG: TE012921019/TE012921007

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID	
890-371-1	PH01	Solid	03/16/21 10:06	03/16/21 16:45		_
890-371-2	PH01 A	Solid	03/16/21 12:03	03/16/21 16:45		
890-371-3	PH02	Solid	03/16/21 10:20	03/16/21 16:45		
890-371-4	PH02 A	Solid	03/16/21 12:13	03/16/21 16:45		Ę
890-371-5	PH03	Solid	03/16/21 10:23	03/16/21 16:45		
890-371-6	PH03 A	Solid	03/16/21 12:14	03/16/21 16:45		
890-371-7	PH04	Solid	03/16/21 10:50	03/16/21 16:45		
890-371-8	PH04 A	Solid	03/16/21 10:52	03/16/21 16:45		
890-371-9	PH05	Solid	03/16/21 13:00	03/16/21 16:45		
890-371-10	PH05 A	Solid	03/16/21 13:02	03/16/21 16:45		3
890-371-11	PH06	Solid	03/16/21 12:37	03/16/21 16:45		
890-371-12	PH06 A	Solid	03/16/21 12:38	03/16/21 16:45		
890-371-13	PH07	Solid	03/16/21 13:12	03/16/21 16:45		_
890-371-14	PH07 A	Solid	03/16/21 13:16	03/16/21 16:45		
						1
						1
						1

			2	hain of C				
X	NCO	Houstor	n,TX (281) 240-4200 D	CIIAII OI COSCOY Dallas,TX (214) 902-0300 San Antonio.	Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334 Midlood TV (132, 704-5440) El Baso TX (915/585-5443 Lubbook TX (806)/94-1296			)
-		Hobbs, NM (575-39)	2-7550) Phoenix,AZ (4)	30-355-0900) Atlanta,G/	Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	WW	www.xenco.com Page	of
Project Manager:	Kalic Jennings		Bill to: (if different)	Kyle Littrell			Work Order Comments	]
	2	office	Company Name:	XTO Energy			Brownfields RC	uperfund
	3300 North A St. Bldg 1, Unit 222	Unit 222	Address:	3104 E Greene St.		State of Project: NM		]
te ZIP:	Midland, TX 79705		City, State ZIP:	Carisbad, NM		Reporting:Level II		
	(432) 704-5178	Emai	travis.casey@ws	Email: travis.casey@wsp.com, kalei.jennings@wsp.com, dan	s@wsp.com, dan.moir@w	Deliverables: EDD	ADaPT D Other:	
Project Name:	PLU 18 30 C13 1	т ////	Turn Around		ANALYSIS REQUEST	EST	Work Or	Work Order Notes
en.	TE 012921019/18012921007	1007 Routine	tine A				112, men	4632
		Rush:					nAPP 203 6552621	52621
Sampler's Name: T	Travis Casey	Due	Due Date:				1001263771	
SAMPLE RECEIPT	Temp Blank:	Yes No Wet Ice:	Yes No				1632501001	~ `
Temperature (°C):	4.0/3.8	Thermometer ID		))			AOI:	
Received Intact:	Z	CININ-Q		1)	890-371 Chain	-371 Chain of Custody	1+841-510-05	14841-
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0. (	A 802			TAT starts the d lab, if received	TAT starts the day recevied by the lab, if received by 4:30pm
Sample Identification	Ication M	Date Time	Depth	PH (EP EX (E			Sample	Sample Comments
0H01	2	3.16. 11 1006		E			Discide	
PHOIA			2, 1	/ / /				
PHO2		1020	1. 1	<b>d d d</b>				
PHOZA		1213	2 1	< < < <				
PHO3		1023	-,					
PHOSA		1214	2					
10#04		1050						
PHOHO		1052	2, 1	V V V				
PHOS		1300	-,	× × ×				
PHOSA		1 1302	2' 1	V V V				
Total 200.7 / 6010	0 200.8 / 6020:	- 84	13PPM Texas 11 A	Al Sb As Ba Be B	CRA 13PPM Texas 11 AISb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo N	o Mg Mn Mo Ni K Se Ag	SiO2 Na Sr TI Sn U V 1631 / 245.1 / 7470	V Zn 70 / 7471 : Ha
Notice: Signature of this do	Currene Metricod(s) and Meter(s) to be analycod Signature of this document and relinquishment of samples	amples constitutes a valid p	Irchase order from client	company to Xenco, its af	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	is standard terms and conditions		
of service. Xenco will be lla of Xenco. A minimum charg	ble only for the cost of samples le of \$75.00 will be applied to e	s and shall not assume any re ach project and a charge of \$	sponsibility for any loss 5 for each sample submit	ted to Xenco, but not anal	or 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 chemic in such losses are deto concurred by the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the chemic in such losses are deto concurred by the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the chemic in such losses are deto concord by the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the chemic in such losses are deto concord by the cost of sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	intess previously negotiated.		
Relinquished by: (Signature)	Signature)	Received by; (Signature)	ure)	Date/Time	Relinquished by: (Signature)	ture) Received by: (Signature)	(Signature)	Date/Time
1 Ton Sch	Can Can	loe (who	~	.16.21 164	5			
3		1			4			
G					6		Reviso	Revised Date 051418 Rev 2018.1

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3/28/2021

	5	and the	Relinquished by: (Signature)	Notice: Signature of this document a of service. Xenco will be liable only i of Xenco. A minimum charge of \$75.	Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010 2				PH07A	PH07	PHO6A	20HO	Sample Identification		Seals:	Received Intact:		SAMPLE RECEIPT	Sampler's Name: Travis Casey		Project Number: TEO/29	Project Name: PLU (	Phone: (432) 704-5178	City, State ZIP: Midland	Address: 3300 No	Company Name: WSP U:	Project Manager: Kalei		XIIZ	
		( loe ( hy	ure) Received 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.	fetal(s) to be analyzed To	200.8 / 6020: 8RCRA		-					1 12.91.5 5	Matrix Date Sampled	NO N/A	10 N/A	Yes No Ine		Temp Blank: Yes No	asey		TE012921019/TE012921007	PLU 18 32 673 161 H	04-5178	Midland, TX 79705	3300 North A St. Bldg 1, Unit 222	AIn	Jennings	Hobbs,N	Ō	
		V 3-16-21	: (Signature)	s a valid purchase order from clie ume any responsibility for any lo: charge of \$5 for each sample subr	ICLP/SPLP 6010: 8RCRA So As Ba Ba Cd Cr Co Cu Pb Min Mo NI Se Ag TI U	13PPM Texas 11				1316 2'	13/2 11	1238 2'	1237 1	Time Depth Sampled		Correction Factors			Wet-lee. Yes No	Due Date:	Rush:	Routine A	Turn Around	Email: travis.casey@w	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	miqiand, ۱۸ (432-704-9440) EL Paso, ۱۸ (919)905-9443 בעסטטרא, ۱۸ (909)794-1290 Hobbs,NM (575-392-7560) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8600) Tampa,FL (813-620-2000)	Houston,TX (281) 240-4200	
	4 0	1645 2	Date/Time	ant company to Xenco, its affiliat sses or expenses incurred by th mitted to Xenco, but not analyze	VA Sb As Ba Be Cd	Al Sb As Ba Be B C							1 4 4 4	Number TPH (El BTEX (I Chlorid	PA 80 EPA 8	915) 3021)								Email: travis.casey@wsp.com, kalei.jennings@wsp.com, dar	Carlsbad, NM	3104 E Greene St.	: XTO Energy	Kyle Littrell	mialand, i X (432-704-9440) EL Paso, i A (919)989-9449 Lubbock, i A (909)794-1280 175-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (8	Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334	Chain of Custody
			Relinquished by: (Signature)	les and subcontractors. It assignt te client if such losses are due to d. These terms will be enforced u	<del>Cr Co Cu Pb Min</del> Mo N	Cd Ca Cr Co Cu Fe Pb																	ANALYSIS REQUEST	@wsp.com, dan.moir@w					Lubbock, I A (ovo)/ 94-1290 770-449-8800) Tampa,FL (813-	an Antonio,TX (210) 509-3334	stody
			ure) Received by: (Signature)	ors. It assigns standard terms and conditions es are due to circumstances beyond the control be enforced unless previously negotiated.		Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr															3			Deliverables: EDD	Reporting:Level IIevel IIIPST/UST	State of Project: NM	Program: UST/PST PRP Brownfields	Work Order Comments	-620-2000) <u>www.xenco.com</u>		Work Order No:
Revised Date 051418 Rev. 2018.1			Date/Time		1631 / 245.1 / 7470 / 7471 : Hg	Sr TI Sn U V Zn				1			Discrete D	Sample Comments 5	1	the	30-015-414997	1632501001	1665771001	C. C # 5	nArp2036552621	11/2 10 en r H3	Work Order Notes	Other:		]	ds RC Duperfund	nments	Page 2 of 2	)	/2021

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# Eurofins Xenco, Carlsbad 1089 N Canal St. Carlsbad NM 88220

# **Chain of Custody Record**

13

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1089 N Canal St. Carlsbad NM 86220 Phone 575-988-3199 Fax: 575-988-3199	•	Chain of Custody Record	of Cust	ody R	ecorc	hadan.											ېر م	uro	🐝 eurotins		Environment Testing America	ica	int Te	sting
Client Information (Sub Contract Lab)	Sampler			Lab PM Krame	Lab PM Kramer Jessica	ι Δύ					Carrier Tracking No(s):	Tracki	ng No(s	,Ÿ			COC No: 890-10	COC No: 890-104 1						
shipping/Receiving	Phone.			E-Mail jessic	E-Mail jessica kramer@eurofinset.com	@euro	finset.	Com			State of Origin New Mexico	Origin	Ŭ				Page: Page	<sup>p</sup> age: Page 1 of 2	2					
ompany Eurofins Xenco					Accreditations Required (See note) NELAP - Texas	ns Requ Texas	ired (Se	e note)						į			Job #:	Job #: 890371-1	-					
.ddress: 211 W Florida Ave, ,	Due Date Requested 3/23/2021	ed						Analy	vsis	Requested	IPSt	2					Pres	ervati	Preservation Codes	odes	"			
3ty Aidland	TAT Requested (days)	ays)·			2							<sup>2</sup>	_	-		22		A - HCL B NaOH		77	M Hexane N - None	xane 1e		
tate, Zip: 'X, 79701					2													Zn Acetate Nitric Acid NaHSO4	4 bide		- Na	XaO2 XG4S		
hone: .32-704-5440(Tel)	PO #:					ГРН	e										G TI	F MeOH G - Amchlor	٦.		-H2S	2S200		
mail	WO #:					p Full	Chlorid										I	scorbi	Ascorbic Acid ce DI Water		T TSP Dode	TSP Dodecahydrate Acetone	ecahy	drate
roject Name LU 18 BD CTB 161H	Project #: 88000107				s or I		EACH											K-EDTA L EDA		N <	Z V pH	pH 4-5 other (specify)	eify)	
ite:	SSOW#				SD (Ye		D/DI_L										Other:	;						
			Sample Type	Matrix ( <sup>W=water</sup> S=solid	Filtered orm MS/M B/5035FP_	MOD_NM/8	ORGFM_28									Number								
ample Identification - Client ID (Lab ID)	Sample Date	<u> </u>	G=grab) в	<u>P</u>	Per	4	300_				_	1				Tot		Spe	cial	Insti	Special Instructions/Note:	ons/	Note	
H01 (890-371-1)	3/16/21	10.06 Mountain	Solid	Solid	×	×	×	-	inder S	1799 5 5 5						- 5							ľ	
H01 A (890-371-2)	3/16/21	12 03 Mountain		Solid	×	×	×									<u> </u>			l					
H02 (890-371-3)	3/16/21	10 20 Mountain		Solid	×	×	×									-								
H02 A (890-371-4)	3/16/21	12 13 Mountain		Solid	×	×	×									- <b>L</b>								
HO3 (890-371-5)	3/16/21	10 23 Mountain		Solid	×	×	×									-								
H03 A (890-371-6)	3/16/21	12 14 Mountain		Solid	×	×	×									-								
H04 (890-371-7)	3/16/21	10 50 Mountain		Solid	×	×	×									-								
H04 A (890-371-8)	3/16/21	10 52 Mountain		Solid	×	×	×									4								
H05 (890-371-9)	3/16/21	13 00 Mountain		Solid	×	×	×									-								
ote: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently anitalin accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC.	places the ownership being analyzed the s urn the signed Chain	o of method ana amples must be of Custody attes	alyte & accredita shipped back sting to said cor	ation compliand to the Eurofins mplicance to Ei	xe upon out Xenco LLC urofins Xenc	subcont laborati 20 LLC.	tract lab ory or o	oratorie ther ins	s. This truction	s sampl s will b	e shipn e provic	hentis Aed A	forwar ny cha	ded ur nges t	nder c o acci	hain-c	f-cust on sta	tus sh	the la	aborat ve brou	ory dc ught to	ves no o Eurc	fins X	3ntly enco
ossible Hazard Identification					Sample Disposal ( A fee	e Disp	iosal (	A fee	may	be assessed if samples are retained longer	sess	ed if	samp	les a		tain	ed lo	nger	that	11	than 1 month)	E		
eliverable Requested 1 II III IV Other (specify)	Primary Deliverable Rank. 2	able Rank. 2			Special Instructions/QC R	al Instructions/QC	ictions		Requir	equirements	ints	n by i	ao			AICI	AICHIVE FOR	9			Mo	Months		
mpty Kit Relinquished by		Date			lime.						- 3	Method of Shipment:	of Ship	ment										
ainquished by Cie City 3:17:21 10/10			0	Company	Rec	Received by	~						Dat	Date/Time:	99						Company	ΥN		
	Date/ lime			Company	Rec	Received by	•						Dat	Date/Time:							Company	γnε		
1	Date/Time		0	Company	Reo	Received by	×						Dat	Date/Time:	,e						Company	YUR		
Custody Seals Intact Custody Seal No Δ Yes Δ No					Coo	Cooler Temperature(s) °C	peratur	e(s) °C	and Ot	and Other Remarks	narks		ŀ							ļ				
																					Ver 11/01/2020	1/01/	2020	
Eurofins Xenco, Carlsbad 1089 N Canal St. Carlsbad NM 88220 Phone 575-988-3199 Fax: 575-988-3199	Chain of C	Custody Record	cord			🐝 eurofins Environment Testing America	eceived by																	
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Client Information (Sub Contract Lab)	Sampler	Lab PM Kramer	r Jessica		Carrier Tracking No(s)	COC No: 890-104 2	, <b>00</b>																	
Client Contact: Shinobina/Receiving	Phone:	E-Mail jessica	ı kramer@eurofinset		State of Origin: New Mexico	Page Page 2 of 2	C <b>D:</b> (																	
Company Eurofins Xenco		<u> </u>	Accreditations Required (See note) NELAP - Texas	iee note)		Job #: 890-371-1	5/16																	
Address. 1211 W Florida Ave	Due Date Requested			ysis	Requested		/202																	
City Midland	TAT Requested (days)					B NaCH M None C Zn Acetate O AsNaO2	21 8::																	
State Zip TX, 79701						Nitric Acid NaHSO4 MeOH	51:5																	
Phone 432-704-5440(Tel)	# Od		HdT			Amchlor S Ascorbic Acid T	2 A.																	
Email	.#OM		ilufi qə (ov			I Ice U J DI Water V	M																	
Project Name PLU 18 BD CTB 161H	Project # 88000107		A_S_Pr TEX A_S_Pr			L EDA Z																		
Site	SSOW#:	0	VN9101 Cale B			0 Other																		
	Sample Type Sample (C=comp	Matrix (w=water s=solid,	d Filtered : 6000_UM/8 18/6036FP_6 18/6036FP_6			Joquinn Is																		
Sample Identification - Client ID (Lab ID)	<u> </u>	BT=Tissue, A=Air) tion Code:	801 805 805			Special Instructions/Note:																		
PH05 A (830-371-10)		TH																						
PH06 (890-371-11)	3/16/21 12 37 3/16/21 Mountain	Solid	× × ×																					
PH06 A (890-371-12)	3/16/21 12 38 Mountain	Solid	× × ×																					
PH07 (890-371-13)	3/16/21 13 12 Mountain	Solid	X X X																					
PH07 A (890-371-14)	3/16/21 13 16 Mountain	Solid	× × ×																					
						-																		
Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be ship LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting	C places the ownership of method, analyte & a k being analyzed the samples must be shippe sturn the signed Chain of Custody attesting to :	accreditation complianc ed back to the Eurofins : said complicance to Eu	e upon out subcontract la Kenco LLC laboratory or o rofins Xenco LLC	iboratones. I his samp other instructions will t	le snipment is torwarded under crain le provided Any changes to accredit	& accreditation compliance upon out subcontract laborationes. This sample shipment is rowardee under chain-or-custody in the laboratory does not currenuy pped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco to said complicance to Eurofins Xenco LLC.																		
Possible Hazard Identification			Sample Disposal	(A fee may be a	nples are re	ined longer than 1 month)																		
Uncontinued Deliverable Requested I, II III IV, Other (specify)	Primary Deliverable Rank. 2		Return to Citeria Special Instructions/QC Requirements.	nenu u Is/QC Requiremen	osar by Lau																			
Empty Kit Relinquished by	Date		Time A		Method of Shipment:																			
Relinquished by C. Frank 212-21	Date/Time.	Company	Received	AMOR	Date/Filme.	11415 Company																		
Relinquished by	Date/Time:	Company	Received by		Date/Time:	Company	Pag																	
Relinquished by	Date/Time:	Company	Received by		Date/Time:	Company	ge 10																	
Custody Seals Intact. Custody Seal No A Yes A No			Cooler Temperatu	Cooler Temperature(s) °C and Other Remarks:	marks:		)9 of																	
			<b>13</b> 14	11 12	7 8 9 10	Ver 11/01/2020	<i>170</i>																	
			3	2																				

3/28/2021

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Job Number: 890-371-1

List Source: Eurofins Carlsbad

SDG Number: TE012921019/TE012921007

#### Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 371 List Number: 1 Creator: Clifton, Cloe

Login Number: 371			List Source: Eurofins Carlsbad	_
List Number: 1				5
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			8
Samples were received on ice.	True			
Cooler Temperature is acceptable.	True			9
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			13
Sample containers have legible labels.	True			14
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			

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

#### Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 371

List Number: 2

Job Number: 890-371-1

SDG Number: TE012921019/TE012921007

List Source: Eurofins Midland List Creation: 03/17/21 02:26 PM

Creator: Kramer, Jessica		
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?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing America

# ANALYTICAL REPORT

Job Number: 890-383-1 Job Description: PLU 18 BD CTB 161H

> For: WSP USA Inc. 2777 N. Stemmons Freeway Suite 1600 Dallas, TX 75207 Attention: Dan Moir

CAMER

Approved for release Jessica Kramer Project Manager 3/29/2021 7:08 PM

Jessica Kramer, Project Manager 1211 W. Florida Ave, Midland, TX, 79701 jessica.kramer@eurofinset.com 03/29/2021

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

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.

Eurofins Xenco, Carlsbad 1089 N Canal St., Carlsbad, NM 88220 Tel (575) 988-3199 Fax (575) 988-3199 <u>www.EurofinsUS.com</u>



# **Client Sample Result Summary**

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#### Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

Job	ID:	890-383-1

Lab Sample ID:	890-383-1	890-383-2	890-383-3	890-383-4	890-383-5
Client Sample ID:	FS01	FS02	FS03	FS04	FS05
Depth:	2	2	2	2	2
Matrix:	Solid	Solid	Solid	Solid	Solid
Date Collected:	03/17/2021 09:21	03/17/2021 11:06	03/17/2021 12:25	03/17/2021 13:32	03/17/2021 13:34

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

	Prepared: Analyzed:	03/26/2021 03/27/2021		03/26/2021 03/27/2021		03/26/2021 03/27/2021		03/26/2021 03/27/2021	14:55 07:35	03/26/2021 03/27/2021	
Analyte	Unit/RL:	mg/Kg	RL	mg/Kg	RL	mg/Kg	RL	mg/Kg	RL	mg/Kg	RL
Benzene		<0.00200 U	0.00200	<0.00200 U	0.00200	<0.00198 U	0.00198	<0.00201 U	0.00201	<0.00199 U	0.00199
Ethylbenzene		<0.00200 U	0.00200	<0.00200 U	0.00200	<0.00198 U	0.00198	<0.00201 U	0.00201	<0.00199 U	0.00199
Toluene		<0.00200 U	0.00200	<0.00200 U	0.00200	<0.00198 U	0.00198	<0.00201 U	0.00201	<0.00199 U	0.00199
Total BTEX		<0.00200 U	0.00200	<0.00200 U	0.00200	<0.00198 U	0.00198	<0.00201 U	0.00201	<0.00199 U	0.00199
Xylenes, Total		<0.00400 U	0.00400	<0.00399 U	0.00399	<0.00397 U	0.00397	<0.00402 U	0.00402	<0.00398 U	0.00398
m-Xylene & p-Xyleı	ne	<0.00400 U	0.00400	<0.00399 U	0.00399	<0.00397 U	0.00397	<0.00402 U	0.00402	<0.00398 U	0.00398
o-Xylene		<0.00200 U	0.00200	<0.00200 U	0.00200	<0.00198 U	0.00198	<0.00201 U	0.00201	<0.00199 U	0.00199

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

	Prepared:	03/24/2021	09:46	03/24/2021	09:46	03/24/2021 (	09:46	03/24/2021 (	)9:46	03/24/2021 0	)9:46
	Analyzed:	03/25/2021	12:39	03/25/2021	13:43	03/25/2021	14:04	03/25/2021	14:25	03/25/2021 1	14:47
Analyte	Unit/RL:	mg/Kg	RL	mg/Kg	RL	mg/Kg	RL	mg/Kg	RL	mg/Kg	RL
Gasoline Range Or (GRO)-C6-C10	ganics	<49.9 U	49.9	<49.9 U	49.9	<49.9 U	49.9	<50.0 U	50.0	<50.0 U	50.0
Diesel Range Orga C10-C28)	nics (Over	<49.9 U	49.9	<49.9 U	49.9	<49.9 U	49.9	<50.0 U	50.0	<50.0 U	50.0
Oll Range Organics C28-C36)	s (Over	<49.9 U	49.9	<49.9 U	49.9	<49.9 U	49.9	<50.0 U	50.0	<50.0 U	50.0
Total TPH		<49.9 U	49.9	<49.9 U	49.9	<49.9 U	49.9	<50.0 U	50.0	<50.0 U	50.0

#### Method: 300.0 - Anions, Ion Chromatography - Soluble

	Prepared:										
	Analyzed:	03/24/202	1 21:26	03/24/202	1 21:31	03/24/202	1 21:36	03/24/202	1 21:42	03/24/202	21 21:47
Analyte	Unit/RL:	mg/Kg	RL								
Chloride		44.4	5.04	27.3	5.00	4010	25.0	24.3	5.00	95.5	4.95

# **Client Sample Result Summary**

#### Page 114 of 170

Job ID: 890-383-1

#### Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

<b>,</b>	-									
Lab Sample ID:	890-383-6	:	890-383-7		890-383-8		890-383-9		890-383-10	
Client Sample ID:	SW01	:	SW02		SW03		SW04		PH08	
Depth:		(	0 - 2		0 - 2		0 - 2		1	
Matrix:			Solid		Solid		Solid		Solid	
Date Collected:		:03	03/17/2021 1 <sup>.</sup>	1:05	03/17/2021 1	1:08	03/17/2021 1	3:36	03/17/2021 14	4:46
Method: 8021B - Volatile	Organic Co	mpound	s (GC)							
Prepared:	03/26/2021 14:	:55 (	03/26/2021 14	4:55	03/26/2021 1	4:55	03/26/2021 1	4:28	03/26/2021 14	4:28
Analyzed:	03/27/2021 08:	:16 (	03/27/2021 0	8:36	03/27/2021 0	8:57	03/27/2021 1	0:56	03/27/2021 02	2:18
Analyte Unit/RL:	mg/Kg R	RL I	mg/Kg	RL	mg/Kg	RL	mg/Kg	RL	mg/Kg	RL
Benzene	<0.00200 0	.00200	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	< 0.00199	0.00199
	U	I	U		U		U		U	
Ethylbenzene	< 0.00200 0	.00200	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199
	U		U		U		U		U	
Toluene	<0.00200 0	.00200	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200		0.00199
	U 10 00000 0	00200	U 10.00100	0 00100	U	0 00201	U 10 00000	0 00200	U	0.00100
Total BTEX	<0.00200 0	.00200	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00199 U	0.00199
Xylenes, Total	<0.00400 0	.00400	<0.00396	0.00396	<0.00402	0.00402	<0.00399	0.00399	-	0.00398
	U		U	0.00000	U	0.00102	U	0.00000	U	0.00000

m-Xylene & p-Xylene	<0.00400 U	0.00400	<0.00396 U	0.00396	<0.00402 U	0.00402	<0.00399 U	0.00399	<0.00398 U	0.00398
o-Xylene	<0.00200 U	0.00200	<0.00198 U	0.00198	<0.00201 U	0.00201	<0.00200 U	0.00200	<0.00199 U	0.00199

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

	Prepared:	03/24/2021	09:46	03/24/2021	09:46	03/24/2021 (	09:46	03/24/2021 (	09:46	03/24/2021 (	)9:46
	Analyzed:	03/25/2021	15:08	03/25/2021	15:29	03/25/2021	15:50	03/25/2021	16:12	03/25/2021	16:33
Analyte	Unit/RL:	mg/Kg	RL	mg/Kg	RL	mg/Kg	RL	mg/Kg	RL	mg/Kg	RL
Gasoline Range O (GRO)-C6-C10	organics	<50.1 U	50.1	<49.9 U	49.9	<49.8 U	49.8	<50.0 U	50.0	<49.9 U	49.9
Diesel Range Orga C10-C28)	anics (Over	<50.1 U	50.1	<49.9 U	49.9	<49.8 U	49.8	<50.0 U	50.0	<49.9 U	49.9
Oll Range Organic C28-C36)	cs (Over	<50.1 U	50.1	<49.9 U	49.9	<49.8 U	49.8	<50.0 U	50.0	<49.9 U	49.9
Total TPH		<50.1 U	50.1	<49.9 U	49.9	<49.8 U	49.8	<50.0 U	50.0	<49.9 U	49.9

#### Method: 300.0 - Anions, Ion Chromatography - Soluble

	Prepared:										
	Analyzed:	03/23/2021	17:20	03/23/2021	17:26	03/23/2021	1 17:41	03/23/202	1 17:46	03/23/202	21 17:51
Analyte	Unit/RL:	mg/Kg	RL	mg/Kg	RL	mg/Kg	RL	mg/Kg	RL	mg/Kg	RL
Chloride		512	4.95	613	4.96	684	4.99	1170	4.95	1350	24.8

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# **Client Sample Result Summary**

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Job ID: 890-383-1

#### Client: WSP USA Inc. Project/Site: PLU 18 BD CTB 161H

Lab Sample ID:	890-383-11	890-383-12	890-383-13
Client Sample ID:	PH08A	PH09	PH09A
Depth:	2	1	2
Matrix:	Solid	Solid	Solid
Date Collected:	03/17/2021 14:47	03/17/2021 15:01	03/17/2021 15:03

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

	Prepared: Analyzed:			03/26/2021 03/27/2021		03/26/2021 03/27/2021	
Analyte	Unit/RL:	mg/Kg	RL	mg/Kg	RL	mg/Kg	RL
Benzene		<0.00198 U	0.00198	<0.00200 U	0.00200	<0.00200 U	0.00200
Ethylbenzene		<0.00198 U	0.00198	<0.00200 U	0.00200	<0.00200 U	0.00200
Toluene		<0.00198 U	0.00198	<0.00200 U	0.00200	<0.00200 U	0.00200
Total BTEX		<0.00198 U	0.00198	<0.00200 U	0.00200	<0.00200 U	0.00200
Xylenes, Total		<0.00397 U	0.00397	<0.00399 U	0.00399	<0.00399 U	0.00399
m-Xylene & p-Xylen	e	<0.00397 U	0.00397	<0.00399 U	0.00399	<0.00399 U	0.00399
o-Xylene		<0.00198 U	0.00198	<0.00200 U	0.00200	<0.00200 U	0.00200

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

	•	03/24/2021		03/24/2021		03/24/2021 (	
	Analyzed:	03/25/2021	17:15	03/25/2021	17:36	03/25/2021	17:57
Analyte	Unit/RL:	mg/Kg	RL	mg/Kg	RL	mg/Kg	RL
Gasoline Range Orga (GRO)-C6-C10	nics	<50.0 U	50.0	<49.8 U	49.8	<49.9 U	49.9
Diesel Range Organic C10-C28)	s (Over	<50.0 U	50.0	<49.8 U	49.8	<49.9 U	49.9
Oll Range Organics (C C28-C36)	Over	<50.0 U	50.0	<49.8 U	49.8	<49.9 U	49.9
Total TPH		<50.0 U	50.0	<49.8 U	49.8	<49.9 U	49.9

#### Method: 300.0 - Anions, Ion Chromatography - Soluble

	Prepared:						
	Analyzed:	03/23/2021	17:57	03/23/202	21 18:02	03/23/202	1 18:07
Analyte	Unit/RL:	mg/Kg	RL	mg/Kg	RL	mg/Kg	RL
Chloride		2140	24.9	198	4.99	285	4.98

Received by OCD: 6/16/2021 8:51:52 AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

#### Laboratory Job ID: 890-800-1

Client Project/Site: PLU 18 BD 161H

#### For:

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

Attn: Kalei Jennings

NRAMER

Authorized for release by: 6/14/2021 4:09:12 PM

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

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

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

LINKS **Review your project** results through Total Access **Have a Question?** Ask-The Expert Visit us at: www.eurofinsus.com/Env

Released to Imaging: 7/13/2021 2:49:23 PM

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Laboratory Job ID: 890-800-1

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	Definitions/Glossary	
Client: WSP US		Job ID: 890-800-1
Project/Site: PL	U 18 BD 161H	
Qualifiers		
GC VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VOA		
Qualifier	Qualifier Description	
*_	LCS and/or LCSD is outside acceptance limits, low biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
α	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	1
DL	Detection Limit (DoD/DOE)	1
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)	
TNITO		

TNTC Too Numerous To Count

.

#### Job ID: 890-800-1

#### Job ID: 890-800-1

#### Laboratory: Eurofins Xenco, Carlsbad

#### Narrative

Job Narrative 890-800-1

#### Receipt

The samples were received on 6/11/2021 11:31 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 3.2°C

#### **Receipt Exceptions**

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: PH11 (890-800-1) and PH11A (890-800-2).

#### GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: PH11 (890-800-1), PH11A (890-800-2), (890-799-A-9-C), (890-799-A-9-A MS) and (890-799-A-9-B MSD). 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

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

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Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00200 U

<0.00200 U

RL

0.00200

0.00200

Unit

mg/Kg

mg/Kg

D

Prepared

06/12/21 11:00

06/12/21 11:00

Job ID: 890-800-1

#### Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

#### **Client Sample ID: PH11**

Date Collected: 06/11/21 08:48 Date Received: 06/11/21 11:31

Sample Depth: - 1

Analyte

Benzene

Toluene

# Lab Sample ID: 890-800-1

Analyzed

06/13/21 03:22

06/13/21 03:22

Matrix: Solid

5 Dil Fac 1 1

Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/12/21 11:00	06/13/21 03:22	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		06/12/21 11:00	06/13/21 03:22	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/12/21 11:00	06/13/21 03:22	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		06/12/21 11:00	06/13/21 03:22	1
Total BTEX	<0.00401	U	0.00401	mg/Kg		06/12/21 11:00	06/13/21 03:22	• • • • • •
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			06/12/21 11:00	06/13/21 03:22	1
1,4-Difluorobenzene (Surr)	112		70 - 130			06/12/21 11:00	06/13/21 03:22	1
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *-	49.8	mg/Kg		06/13/21 10:54	06/14/21 02:30	
Diesel Range Organics (Over C10-C28)	<49.8	U *-	49.8	mg/Kg		06/13/21 10:54	06/14/21 02:30	
Oll Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		06/13/21 10:54	06/14/21 02:30	
Total TPH	<49.8	U	49.8	mg/Kg		06/13/21 10:54	06/14/21 02:30	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	82		70 - 130			06/13/21 10:54	06/14/21 02:30	
o-Terphenyl	74		70 - 130			06/13/21 10:54	06/14/21 02:30	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	73.7		5.04	mg/Kg			06/14/21 12:14	1
lient Sample ID: PH11A						Lab Sa	mple ID: 890	)-800-2
ate Collected: 06/11/21 08:50							Matri	ix: Solic
ate Received: 06/11/21 11:31								
ample Depth: - 2								

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		06/12/21 11:00	06/13/21 03:42	1
Toluene	<0.00202	U	0.00202	mg/Kg		06/12/21 11:00	06/13/21 03:42	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		06/12/21 11:00	06/13/21 03:42	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		06/12/21 11:00	06/13/21 03:42	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		06/12/21 11:00	06/13/21 03:42	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		06/12/21 11:00	06/13/21 03:42	1
Total BTEX	<0.00403	U	0.00403	mg/Kg		06/12/21 11:00	06/13/21 03:42	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130			06/12/21 11:00	06/13/21 03:42	1
1,4-Difluorobenzene (Surr)	120		70 - 130			06/12/21 11:00	06/13/21 03:42	1

#### **Client Sample Results**

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

#### **Client Sample ID: PH11A**

Date Collected: 06/11/21 08:50 Date Received: 06/11/21 11:31

Sample Depth: - 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.7	U *-	49.7	mg/Kg		06/13/21 10:54	06/14/21 02:51	1
GRO)-C6-C10								
Diesel Range Organics (Over	<49.7	U *-	49.7	mg/Kg		06/13/21 10:54	06/14/21 02:51	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		06/13/21 10:54	06/14/21 02:51	1
Total TPH	<49.7	U	49.7	mg/Kg		06/13/21 10:54	06/14/21 02:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130			06/13/21 10:54	06/14/21 02:51	1
p-Terphenyl	76		70 - 130			06/13/21 10:54	06/14/21 02:51	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.98		4.98	mg/Kg			06/14/21 12:31	1

Job ID: 890-800-1

Matrix: Solid

5

Lab Sample ID: 890-800-2

Eurofins Xenco, Carlsbad

**Released to Imaging:** 7/13/2021 2:49:23 PM

Job ID: 890-800-1

Prep Type: Total/NA

Prep Type: Total/NA

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

Matrix:	Colid
watrix.	<b>3</b> 0110

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
b Sample ID	Client Sample ID	(70-130)	(70-130)	
-800-1	PH11	103	112	
-800-2	PH11A	114	120	
S 880-4043/1-A	Lab Control Sample	91	100	
SD 880-4043/2-A	Lab Control Sample Dup	87	101	
3 880-4043/5-A	Method Blank	100	97	
Surrogate Legend				

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
b Sample ID	Client Semula ID	1CO1 (70-130)	OTPH1 (70-130)	
пріе і -1	Client Sample ID PH11 PH11	82	74	
-2	PH11A	82	76	
0-4071/2-A	Lab Control Sample	94	79	
880-4071/3-A	Lab Control Sample Dup	89	78	
880-4071/1-A	Method Blank	88	80	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

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

Lab Sample ID: MB 880-4043 Matrix: Solid	/ <b>5-A</b>								Client S	ample ID: Me Prep Typ		
Analysis Batch: 4046												: 4043
Analysis Baten. 4040		МВ	МВ							Trop	Jaton	. 4040
Analyte			Qualifier	R	L	Unit		DI	Prepared	Analyzed		Dil Fac
Benzene		<0.00200	U	0.0020	0	mg/K	g		12/21 11:00	06/12/21 19:		1
Toluene		<0.00200	U	0.0020	0	mg/K	-	06/	12/21 11:00	06/12/21 19:	47	1
Ethylbenzene		<0.00200	U	0.0020	0	mg/K	-	06/	12/21 11:00	06/12/21 19:	47	1
m-Xylene & p-Xylene		<0.00400	U	0.0040	0	mg/K	g	06/	12/21 11:00	06/12/21 19:	47	1
o-Xylene		<0.00200	U	0.0020	0	mg/K	g	06/	12/21 11:00	06/12/21 19:	47	1
Xylenes, Total		<0.00400	U	0.0040	0	mg/K	g	06/	12/21 11:00	06/12/21 19:	.47	1
Total BTEX		<0.00400	U	0.0040	0	mg/K	g	06/	12/21 11:00	06/12/21 19:	47	1
		MB	МВ									
Surrogate	%	Recovery		Limits					Prepared	Analyzed	1	Dil Fac
4-Bromofluorobenzene (Surr)		100		70 - 130	_				12/21 11:00			1
1,4-Difluorobenzene (Surr)		97		70 - 130				06/	/12/21 11:00	06/12/21 19	47	1
Lab Sample ID: LCS 880-404	3/1-A							Clien	t Sample	ID: Lab Con	trol S	ample
Matrix: Solid										Prep Typ		
Analysis Batch: 4046												: 4043
				Spike	LCS	LCS				%Rec.		
Analyte				Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene				0.100	0.09634		mg/Kg		96	70 - 130		
Toluene				0.100	0.09954		mg/Kg		100	70 - 130		
Ethylbenzene				0.100	0.09843		mg/Kg		98	70 - 130		
m-Xylene & p-Xylene				0.200	0.1904		mg/Kg		95	70 - 130		
o-Xylene				0.100	0.09576		mg/Kg		96	70 - 130		
		LCS LCS	;									
Surrogate	%Reco	overy Qua	lifier	Limits								
4-Bromofluorobenzene (Surr)		91		70 - 130								
1,4-Difluorobenzene (Surr)		100		70 - 130								
Lab Sample ID: LCSD 880-40	13/2-0						CI	iont Sar	nnie ID: I	ab Control S	Samul	
Matrix: Solid	-5/2-4						01			Prep Typ		-
Analysis Batch: 4046												: 4043
. analysis Batom Toto				Spike	LCSD	LCSD				%Rec.		RPD
Analyte				Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene				0.100	0.08389		mg/Kg		84	70 - 130	14	35
Toluene				0.100	0.09050		mg/Kg		91	70 - 130	10	35
Ethylbenzene				0.100	0.09040		mg/Kg		90	70 - 130	9	35
m-Xylene & p-Xylene				0.200	0.1887		mg/Kg		94	70 - 130	1	35
o-Xylene				0.100	0.08744		mg/Kg		87	70 - 130	9	35
	L	.CSD LCS	D									

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Job ID: 890-800-1

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Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

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

Lab Sample ID: MB 880-4071/1	-A							Client Sa	mple ID: Me		
Matrix: Solid									Prep Typ		
Analysis Batch: 4067									Prep E	Batch	n: <b>407</b> ′
		MB									
Analyte		Qualifier	RL 50.0		Unit			repared 3/21 10:54	Analyzed 06/13/21 23:2		Dil Fa
Basoline Range Organics GRO)-C6-C10	<50.0	U	50.0		mg/Kg	1	06/1	3/21 10.54	00/13/21 23.	23	
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg	a a a a a a a a a a a a a a a a a a a	06/1	3/21 10:54	06/13/21 23:	23	
C10-C28)					5.	,					
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg	9	06/1	3/21 10:54	06/13/21 23:	23	
otal TPH	<50.0	U	50.0		mg/Kg	3	06/1	3/21 10:54	06/13/21 23:	23	
	МР	МВ									
			Lingita					way award	Amelymed		
Currogate -Chlorooctane	%Recovery 88		Limits 70 - 130					repared 3/21 10:54	Analyzed 06/13/21 23:	<u> </u>	Dil Fa
	80		70 - 130 70 - 130					3/21 10:54 3/21 10:54	06/13/21 23:		
-Terphenyl	80		70 - 130				06/1	3/21 10.54	00/13/21 23.	23	
ab Sample ID: LCS 880-4071/2	2-4						Client	Sample	ID: Lab Cont	rol S	amn
Aatrix: Solid							onom	oumpio	Prep Typ		
Analysis Batch: 4067									Prep E		
			Spike	LCS	LCS				%Rec.	Juiton	
nalyte			Added		Qualifier	Unit	D	%Rec	Limits		
asoline Range Organics			1000000	930.4	-	mg/Kg		0.09	70 - 130		
GRO)-C6-C10											
iesel Range Organics (Over			1000000	996.5	*_	mg/Kg		0.1	70 - 130		
10-C28)											
	LCS LCS	\$									
urrogate	LCS LCS %Recovery Qua		Limits								
		S alifier	Limits 70 - 130								
Chlorooctane	%Recovery Qua										
-Chlorooctane	%Recovery Qua		70 - 130								
-Chlorooctane -Terphenyl	%Recovery 94 94 79		70 - 130			Clie	ent Sam	iple ID: La	ab Control S	amp	le Du
-Chlorooctane -Terphenyl .ab Sample ID: LCSD 880-4071	%Recovery 94 94 79		70 - 130			Clie	ent Sam	iple ID: L	ab Control S Prep Typ		
-Chlorooctane -Terphenyl .ab Sample ID: LCSD 880-4071 Matrix: Solid	%Recovery 94 94 79		70 - 130			Clie	ent Sam	iple ID: Li		e: To	otal/N
-Chlorooctane -Terphenyl .ab Sample ID: LCSD 880-4071 Matrix: Solid	%Recovery 94 94 79		70 - 130	LCSD	LCSD	Clie	ent Sam	iple ID: Li	Ргер Тур	e: To	otal/N n: 407
-Chlorooctane -Terphenyl ab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067	%Recovery 94 94 79		70 - 130 70 - 130		LCSD Qualifier	Clie	ent Sam	NPIE ID: L	Prep Typ Prep E	e: To	otal/N n: 407 RF
-Chlorooctane -Terphenyl .ab Sample ID: LCSD 880-407 Matrix: Solid Analysis Batch: 4067 	%Recovery 94 94 79		70 - 130 70 - 130 Spike		Qualifier			-	Prep Typ Prep E %Rec.	e: To Batch	otal/N n: 407 RF Lim
-Chlorooctane -Terphenyl .ab Sample ID: LCSD 880-4074 Matrix: Solid Analysis Batch: 4067 	%Recovery 94 94 79		70 - 130 70 - 130 Spike Added 1000000	Result 904.4	Qualifier *-	Unit mg/Kg		<b>%Rec</b>	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	otal/N 1: 407 RF Lim
-Chlorooctane -Terphenyl .ab Sample ID: LCSD 880-407 Matrix: Solid Analysis Batch: 4067 malyte sasoline Range Organics GRO)-C6-C10 iesel Range Organics (Over	%Recovery 94 94 79		70 - 130 70 - 130 Spike Added	Result	Qualifier *-	Unit		%Rec	Prep Typ Prep E %Rec. Limits	e: To Batch RPD	otal/N 1: 407 RP Lim
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-407 Matrix: Solid Analysis Batch: 4067 malyte Gasoline Range Organics GRO)-C6-C10 biesel Range Organics (Over	%Recovery 94 94 79		70 - 130 70 - 130 Spike Added 1000000	Result 904.4	Qualifier *-	Unit mg/Kg		<b>%Rec</b>	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	otal/N 1: 407 RP Lim
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-407 Matrix: Solid Analysis Batch: 4067 malyte Gasoline Range Organics GRO)-C6-C10 biesel Range Organics (Over	%Recovery 94 94 79	lifier	70 - 130 70 - 130 Spike Added 1000000	Result 904.4	Qualifier *-	Unit mg/Kg		<b>%Rec</b>	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	otal/N 1: 407 RP Lim
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	%Recovery         Qua           94         79           1/3-A	sD	70 - 130 70 - 130 Spike Added 1000000	Result 904.4	Qualifier *-	Unit mg/Kg		<b>%Rec</b>	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	otal/N 1: 407 RP Lim
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Analyte Basoline Range Organics GRO)-C6-C10 biesel Range Organics (Over 210-C28)	<u>%Recovery</u> Qua 94 79 1/3-A 	sD	70 - 130 70 - 130 Spike Added 1000000	Result 904.4	Qualifier *-	Unit mg/Kg		<b>%Rec</b>	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	otal/N 1: 407 RP Lim
Chlorooctane Terphenyl ab Sample ID: LCSD 880-407 latrix: Solid malysis Batch: 4067 nalyte asoline Range Organics GRO)-C6-C10 iesel Range Organics (Over 10-C28) urrogate Chlorooctane	%Recovery Qua 94 79 1/3-A LCSD LCS %Recovery Qua	sD	70 - 130 70 - 130 Spike Added 1000000 1000000	Result 904.4	Qualifier *-	Unit mg/Kg		<b>%Rec</b>	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	otal/N n: 407 RF Lin
-Chlorooctane -Terphenyl ab Sample ID: LCSD 880-4071 fatrix: Solid malysis Batch: 4067 malyte asoline Range Organics GRO)-C6-C10 iesel Range Organics (Over 10-C28) urrogate -Chlorooctane -Terphenyl	%Recovery         Qua           94         94           79         79           1/3-A	SD	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4	Qualifier *-	Unit mg/Kg		<b>%Rec</b>	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	otal/N 1: 407 RF Lim
Surrogate -Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4074 Matrix: Solid Analysis Batch: 4067 Analyte Basoline Range Organics GRO)-C6-C10 biesel Range Organics (Over 210-C28) Surrogate -Chlorooctane -Terphenyl ethod: 300.0 - Anions, lor	%Recovery       Quadratic         94       79         1/3-A	SD	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4	Qualifier *-	Unit mg/Kg	<u> </u>	%Rec 0.09 0.1	Prep Typ Prep E %Rec. Limits 70 - 130 70 - 130	e: To Batch RPD 3 1	otal/N 1: 407 RR Lin
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Malysis Batch: 4067 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over E10-C28) Murrogate -Chlorooctane -Terphenyl ethod: 300.0 - Anions, lor Lab Sample ID: MB 880-4076/1	%Recovery       Quadratic         94       79         1/3-A	SD	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4	Qualifier *-	Unit mg/Kg	<u> </u>	%Rec 0.09 0.1	Prep Typ Prep E %Rec. Limits 70 - 130 70 - 130	e: To Batch RPD 3 1 thod	btal/N RF Lin : :
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate -Chlorooctane -Terphenyl ethod: 300.0 - Anions, Ior Lab Sample ID: MB 880-4076/1 Matrix: Solid	%Recovery       Quadratic         94       79         1/3-A	SD	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4	Qualifier *-	Unit mg/Kg	<u> </u>	%Rec 0.09 0.1	Prep Typ Prep E %Rec. Limits 70 - 130 70 - 130	e: To Batch RPD 3 1 thod	btal/N n: 407 RP Lim 2 2
-Chlorooctane -Terphenyl ab Sample ID: LCSD 880-4071 Matrix: Solid Malysis Batch: 4067 malyte asoline Range Organics GRO)-C6-C10 iesel Range Organics (Over 10-C28) urrogate -Chlorooctane -Terphenyl ethod: 300.0 - Anions, lor ab Sample ID: MB 880-4076/1 Matrix: Solid	%Recovery     Quadratic       94     94       79     79       1/3-A	SD alifier raphy	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4	Qualifier *-	Unit mg/Kg	<u> </u>	%Rec 0.09 0.1	Prep Typ Prep E %Rec. Limits 70 - 130 70 - 130	e: To Batch RPD 3 1 thod	btal/N n: 407 RP Lim 2 2
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over 210-C28) Surrogate -Chlorooctane -Terphenyl ethod: 300.0 - Anions, lor Lab Sample ID: MB 880-4076/1	%Recovery     Quadratic       94     94       79     79       1/3-A     LCSD       %Recovery     Quadratic       89     78       78     Chromatogram       -A     MB	SD	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4 1004	Qualifier *-	Unit mg/Kg mg/Kg	<u> </u>	%Rec 0.09 0.1	Prep Typ Prep E %Rec. Limits 70 - 130 70 - 130	e: To Batch RPD 3 1 thod	Blan

Job ID: 890-800-1

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H Job ID: 890-800-1

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-4076/2-A Matrix: Solid Analysis Batch: 4082					Client	Sample	e ID: Lab C Prep	ontrol S Type: S		
	Spike	LCS	LCS				%Rec.			
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits			i
Chloride	250	244.4		mg/Kg		98	90 - 110			
Lab Sample ID: LCSD 880-4076/3-A Matrix: Solid Analysis Batch: 4082				Clie	nt Sam	nple ID:	Lab Contro Prep	ol Sampl Type: S		
· · · · · · · · · · · · · · · · · · ·	Spike	LCSD	LCSD				%Rec.		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	244.2		mg/Kg		98	90 _ 110	0	20	

**Client Sample ID** 

Method Blank

Lab Control Sample

**Client Sample ID** 

Method Blank

Lab Control Sample

Lab Control Sample Dup

Lab Control Sample Dup

PH11

PH11A

PH11

PH11A

#### **QC** Association Summary

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Matrix

Solid

Solid

Solid

Solid

Solid

Matrix

Solid

Solid

Solid

Solid

Solid

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

**GC VOA** 

890-800-1

890-800-2

Prep Batch: 4043 Lab Sample ID

MB 880-4043/5-A

LCS 880-4043/1-A

Lab Sample ID

MB 880-4043/5-A

LCS 880-4043/1-A

LCSD 880-4043/2-A

890-800-1

890-800-2

LCSD 880-4043/2-A

Analysis Batch: 4046

Method

5035

5035

5035

5035

5035

Method

8021B

8021B

8021B

8021B

8021B

Job ID: 890-800-1

Prep Batch

Prep Batch

4043

4043

4043

4043

4043

Page 126 of 170

# 8

3

GC Semi VOA

#### Analysis Batch: 4067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-800-1	PH11	Total/NA	Solid	8015B NM	4071
890-800-2	PH11A	Total/NA	Solid	8015B NM	4071
MB 880-4071/1-A	Method Blank	Total/NA	Solid	8015B NM	4071
LCS 880-4071/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	4071
LCSD 880-4071/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	4071

#### Prep Batch: 4071

Lab Sample ID 890-800-1	Client Sample ID PH11	Prep Type Total/NA	Matrix	Method 8015NM Prep	Prep Batch
890-800-2	PH11A	Total/NA	Solid	8015NM Prep	
MB 880-4071/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-4071/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-4071/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

#### HPLC/IC

#### Leach Batch: 4076

Lab Sample ID 890-800-1	Client Sample ID PH11	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
890-800-2	PH11A	Soluble	Solid	DI Leach	
MB 880-4076/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-4076/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-4076/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

#### Analysis Batch: 4082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-800-1	PH11	Soluble	Solid	300.0	4076
890-800-2	PH11A	Soluble	Solid	300.0	4076
MB 880-4076/1-A	Method Blank	Soluble	Solid	300.0	4076
LCS 880-4076/2-A	Lab Control Sample	Soluble	Solid	300.0	4076
LCSD 880-4076/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	4076

#### Lab Chronicle

Job ID: 890-800-1

#### Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

#### Client Sample ID: PH11 Date Collected: 06/11/21 08:48

Date Received: 06/11/21 11:31 Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab 5035 XEN MID Total/NA Prep 4043 06/12/21 11:00 KL Total/NA Analysis 8021B 1 4046 06/13/21 03:22 KL XEN MID Total/NA Prep 8015NM Prep 4071 06/13/21 10:54 AM XEN MID Total/NA Analysis 8015B NM 1 4067 06/14/21 02:30 AJ XEN MID XEN MID Soluble Leach DI Leach 4076 06/14/21 09:53 СН Soluble Analysis 300.0 1 4082 06/14/21 12:14 СН XEN MID

#### Client Sample ID: PH11A Date Collected: 06/11/21 08:50 Date Received: 06/11/21 11:31

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4043	06/12/21 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	4046	06/13/21 03:42	KL	XEN MID
Total/NA	Prep	8015NM Prep			4071	06/13/21 10:54	AM	XEN MID
Total/NA	Analysis	8015B NM		1	4067	06/14/21 02:51	AJ	XEN MID
Soluble	Leach	DI Leach			4076	06/14/21 09:53	СН	XEN MID
Soluble	Analysis	300.0		1	4082	06/14/21 12:31	СН	XEN MID

#### Laboratory References:

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

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Matrix: Solid

#### Lab Sample ID: 890-800-1 Matrix: Solid

Lab Sample ID: 890-800-2

Accreditation/Certification Summary

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

Laboratory: Eurofins Xenco, Midland

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

ithority		ogram	Identification Number	Expiration Date	
exas		ELAP	T104704400-20-21	06-30-21	
the agency does not o Analysis Method	• •	Matrix	ied by the governing authority. This list ma		
the agency does not o	ffer certification.	-	, , , , ,		

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Job ID: 890-800-1

#### **Method Summary**

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H Job ID: 890-800-1

Method	Method Description	Protocol	Laboratory	
8021B	Volatile Organic Compounds (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 Ref	erences: ASTM International			
MCAWW	= "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1			
SW846 =	"Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition	, November 1986 And Its Updates.		
Laboratory F	eferences:			
XEN MID	= Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-54	40		

#### Protocol References:

#### Laboratory References:

#### Sample Summary

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H Job ID: 890-800-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-800-1	PH11	Solid	06/11/21 08:48	06/11/21 11:31	- 1
890-800-2	PH11A	Solid	06/11/21 08:50	06/11/21 11:31	- 2

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	Jen'Sca	Relinquished by:	lotice: Signsture of this d of service. Xenco will be I of Xenco. A minimum cha	Total 200.7 / 60 Circle Method								/	PH11	PH1	Sample Ident	Sample Custody Seal	Cooler Custody Seals	Received Intact:	Temperature (°C):	SAMPLE RECE		<sup>9</sup> .O. Number:	<sup>9</sup> roject Number:		Phone:						X	\$
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	A	d by: (Signature)	t <del>itutes a valid purcha</del> t assume any respon id a charge of \$5 for e	BRCRA 13PPN TCLP / SPLP				_					ogge	8480	Time Sampled	tal Containers:		4-007	Thermometer ID	Wet ice:	Due Da	Rush: 2	Routine	Turn	Email: tra	0	Ac	C	8.	os,NM (575-392-755	Houston,TX	
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These terms will be enforced unless previously negotiated.         III be applied to each project and by: (Signature)       Date/Time         Received by: (Signature)       O(1/21/1/2)         III be applied to each project and by: (Signature)       Received by: (Signature)         III be enforced unless previously negotiated.       III be enforced unless previously negotiated.</td><td>u Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U         Mn Mo Ni Se Ag Tl U       1631/245.1/747         s. It assigns standard terms and conditions are due to circumstances beyond the control enforced unless previously negotiated.         y: (Signature)       Received by: (Signature)</td><td>u Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Mn Mo Ni Se Ag Tl U . It assigns standard terms and conditions are due to circumstances beyond the control enforced unless previously negotiated. Y: (Signature) Received by: (Signa</td><td>u Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Mn Mo Ni Se Ag TI U s. It assigns standard terms and conditions are due to circumstances beyond the control enforced unless previously negotiated. y: (Signature) Received by: (Signs y: (Signature)</td><td>u Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Mn Mo Ni Se Ag Ti U . It assigns standard terms and conditions are due to circumstances beyond the control enforced unless previously negotiated. Y: (Signature) Received by: (Signa</td><td>u Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Mn Mo Ni Se Ag TI U s. It assigns standard terms and conditions are due to circumstances beyond the control enforced unless previously negotiated. (Signature) Received by: (Signa</td><td>u Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Mn Mo Ni Se Ag TI U s. It assigns standard terms and conditions are due to circumstances beyond the control enforced unless previously negotiated. 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Program: UST/PST       PRP         Project:       NM         Reporting:Level II       evel III         Deliverables:       EDD         S RECUEST       ADaPT        </td><td>mail       With State of Project:       Work Order C         State of Project:       NM         Reporting:Level II       evel III       evel III         Deliverables:       ED       ADaPT         SREQUEST      </td><td>509-3334         94-1296         Program: UST/PST         Program: UST/PST</td></t<>	Inspection of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions         e 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         III be applied to each project and a charge of S5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.         III be applied to each project and a charge of S5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.         III be applied to each project and a charge of S5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.         III be applied to each project and by: (Signature)       Date/Time         Received by: (Signature)       O(1/21/1/2)         III be applied to each project and by: (Signature)       Received by: (Signature)         III be enforced unless previously negotiated.       III be enforced unless previously negotiated.	u Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U         Mn Mo Ni Se Ag Tl U       1631/245.1/747         s. It assigns standard terms and conditions are due to circumstances beyond the control enforced unless previously negotiated.         y: (Signature)       Received by: (Signature)	u Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Mn Mo Ni Se Ag Tl U . 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Proceived by: (Signature) Received by: (Signature)	-coo Chain of Custody -coo	-300 Chain of Custody -300 Chain of Custody		-900 Chain of Custody -900 Chain of Custody	S. REQUEST	S REQUEST S RECUEST -BOD Chain of Custody -BOD Chain of Custody	Reporting:Level II       Evel III       STU         S REQUEST       ADaPT         Bootham of Custody       ADaPT         Bootham of	State of Project:       NM         Reporting:Level II       Deliverables:       EDD       ADaPT         S REQUEST       Image:	Program: UST/PST       PRP       Proventig         State of Project:       NM         Reporting:Level II       level III       BT/U         Deliverables:       EDD       ADaPT         S REQUEST       Importing:Level III       ADaPT         S REQUEST       Importing:Level III       BT/U         S REQUEST       Importing:Level III       BT/U         S REQUEST       Importing:Level III       Importing:Level III         S Recuest       Importing:Level III       Importing:Level III         Received Miness previously negotiated.       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# Received by OCD: 6/16/2021 8:51:52 AM



Job Number: 890-800-1

List Source: Eurofins Xenco, Carlsbad

#### Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 800 List Number: 1 Creator: Ordonez, Gabby

Login Number: 800		List Source: Eurofins	Xenco, Carisbad
List Number: 1			5
Creator: Ordonez, Gabby			
Question	Answer	Comment	6
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		8
Samples were received on ice.	True		
Cooler Temperature is acceptable.	True		9
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		13
Sample containers have legible labels.	True		14
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		

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

The cooler's custody seal, if present, is intact.

The cooler or samples do not appear to have been compromised or

There are no discrepancies between the containers received and the COC.

Samples are received within Holding Time (excluding tests with immediate

There is sufficient vol. for all requested analyses, incl. any requested

Containers requiring zero headspace have no headspace or bubble is

Sample custody seals, if present, are intact.

#### Login Sample Receipt Checklist

Answer

True

True

True

True True

True

True

True

True

N/A

True

Comment

Client: WSP USA Inc.

Login Number: 800

Creator: Kramer, Jessica

Samples were received on ice.

Cooler Temperature is acceptable. Cooler Temperature is recorded.

COC is filled out in ink and legible.

Sample containers have legible labels.

Containers are not broken or leaking.

Sample bottles are completely filled.

Sample Preservation Verified.

Sample collection date/times are provided.

Appropriate sample containers are used.

COC is filled out with all pertinent information.

Is the Field Sampler's name present on COC?

List Number: 2

tampered with.

COC is present.

HTs)

MS/MSDs

<6mm (1/4").

Question

Job Number: 890-800-1

List Source: Eurofins Xenco, Midland
List Creation: 06/12/21 04:19 PM

Received by OCD: 6/16/2021 8:51:52 AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

### Laboratory Job ID: 890-801-1

Client Project/Site: PLU 18 BD 161H

#### For:

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

Attn: Kalei Jennings

NRAMER

Authorized for release by: 6/14/2021 4:10:29 PM

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

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

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

LINKS **Review your project** results through Total Access **Have a Question?** Ask-The Expert Visit us at: www.eurofinsus.com/Env

Released to Imaging: 7/13/2021 2:49:23 PM

Laboratory Job ID: 890-801-1

# 

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#### **Definitions/Glossary**

Client: WSP USA Inc.
Project/Site: PLU 18 BD 161H

Job ID: 890-801-1

Project/Site: PL	.U 18 BD 161H	
Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VOA		5
Qualifier	Qualifier Description	
*_	LCS and/or LCSD is outside acceptance limits, low biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	
	Indicates the analyte was analyzed for but not detected.	8
Glossary		9
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	4 4
DL	Detection Limit (DoD/DOE)	I.R
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	

 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)

Quality Control

- TEQ Toxicity Equivalent Quotient (Dioxin)
- TNTC Too Numerous To Count

QC

#### **Case Narrative**

Job ID: 890-801-1

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4

5

13

#### Job ID: 890-801-1

#### Laboratory: Eurofins Xenco, Carlsbad

#### Narrative

Job Narrative 890-801-1

#### Receipt

The samples were received on 6/11/2021 11:31 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 3.2°C

#### **Receipt Exceptions**

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: PH10 (890-801-1) and PH10A (890-801-2).

#### GC VOA

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

#### GC Semi VOA

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

#### HPLC/IC

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

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

U

<0.00200 U

<0.00200 U

<0.00200 U

<0.00200 U

<0.00401 U

<0.00401 U

<0.00401

RL

0.00200

0.00200

0.00200

0.00401

0.00200

0.00401

0.00401

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

Prepared

06/12/21 11:30

06/12/21 11:30

06/12/21 11:30

06/12/21 11:30

06/12/21 11:30

06/12/21 11:30

06/12/21 11:30

Job ID: 890-801-1

#### Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

#### **Client Sample ID: PH10**

Date Collected: 06/11/21 09:01 Date Received: 06/11/21 11:31

Sample Depth: -1

Analyte

Benzene

Toluene

o-Xylene

Ethylbenzene

Xylenes, Total

Total BTEX

m-Xylene & p-Xylene

Lab Sample ID: 890-801-1

# Matrix: Solid

Analyzed 06/12/21 22:53

06/12/21 22:53

06/12/21 22:53

06/12/21 22:53

06/12/21 22:53

06/12/21 22:53

06/12/21 22:53

5

Dil Fac

1

1

1

1

1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130			06/12/21 11:30	06/12/21 22:53	1
1,4-Difluorobenzene (Surr)	95		70 - 130			06/12/21 11:30	06/12/21 22:53	1
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U *-	50.0	mg/Kg		06/13/21 10:54	06/14/21 03:12	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U *-	50.0	mg/Kg		06/13/21 10:54	06/14/21 03:12	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/13/21 10:54	06/14/21 03:12	1
Total TPH	<50.0	U	50.0	mg/Kg		06/13/21 10:54	06/14/21 03:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130			06/13/21 10:54	06/14/21 03:12	1
o-Terphenyl	73		70 - 130			06/13/21 10:54	06/14/21 03:12	1

#### Analyte **Result Qualifier** RL Unit D Prepared Analyzed Dil Fac 4.96 Chloride 124 mg/Kg 06/14/21 12:36 1

#### **Client Sample ID: PH10A** Date Collected: 06/11/21 09:05 Date Received: 06/11/21 11:31

Sample Depth: - 2

#### Lab Sample ID: 890-801-2 Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyzed Benzene < 0.00199 U 0.00199 mg/Kg 06/12/21 11:30 06/12/21 23:14 Toluene <0.00199 U 0.00199 mg/Kg 06/12/21 11:30 06/12/21 23:14 Ethylbenzene <0.00199 U 0.00199 mg/Kg 06/12/21 11:30 06/12/21 23:14 m-Xylene & p-Xylene 0.00398 06/12/21 11:30 06/12/21 23:14 <0.00398 U mg/Kg o-Xylene <0.00199 U 0.00199 mg/Kg 06/12/21 11:30 06/12/21 23:14 0.00398 06/12/21 23:14 Xylenes, Total <0.00398 U mg/Kg 06/12/21 11:30 Total BTEX <0.00398 U 0.00398 mg/Kg 06/12/21 11:30 06/12/21 23:14 Surrogate 4-Bromofluorobenzene (

Dil Fac	Analyzed	Prepared	Limits	%Recovery Qualifier	Surrogate
1	06/12/21 23:14	06/12/21 11:30	70 - 130	97	4-Bromofluorobenzene (Surr)
1	06/12/21 23:14	06/12/21 11:30	70 - 130	91	1,4-Difluorobenzene (Surr)
	06/12/21 23:14	06/12/21 11:30	70 - 130	91	1,4-Difluorobenzene (Surr)

Eurofins Xenco, Carlsbad

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Dil Fac

1

1

1

1

1

1

1

#### **Client Sample Results**

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

#### **Client Sample ID: PH10A**

Date Collected: 06/11/21 09:05 Date Received: 06/11/21 11:31

Sample Depth: - 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U *-	50.0	mg/Kg		06/13/21 10:54	06/14/21 03:33	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U *-	50.0	mg/Kg		06/13/21 10:54	06/14/21 03:33	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/13/21 10:54	06/14/21 03:33	1
Total TPH	<50.0	U	50.0	mg/Kg		06/13/21 10:54	06/14/21 03:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	81		70 - 130			06/13/21 10:54	06/14/21 03:33	1
o-Terphenyl	73		70 - 130			06/13/21 10:54	06/14/21 03:33	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	37.5		4.95	mg/Kg			06/14/21 12:42	1

Job ID: 890-801-1

#### Lab Sample ID: 890-801-2 Matrix: Solid

5

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5 6 7

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

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
)-801-1	PH10	95	95	
0-801-2	PH10A	97	91	
S 880-4041/1-A	Lab Control Sample	115	104	
SD 880-4041/2-A	Lab Control Sample Dup	115	104	
3 880-4041/5-A	Method Blank	90	92	

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)		
890-801-1	PH10	80	73	·	
890-801-2	PH10A	81	73		
LCS 880-4071/2-A	Lab Control Sample	94	79		- 1
LCSD 880-4071/3-A	Lab Control Sample Dup	89	78		
MB 880-4071/1-A	Method Blank	88	80		

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Job ID: 890-801-1

Prep Type: Total/NA

Prep Type: Total/NA

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

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

Lab Sample ID: MB 880-4047	I/5-A								Client Sa	ample ID: M		
Matrix: Solid										Prep Ty		
Analysis Batch: 4044										Prep	Batch	n: 4041
	MB											
Analyte	Result	Qualifier		RL	Uni	t	D	Pr	repared	Analyze	i	Dil Fa
Benzene	<0.00200	U	0.002	00	mg	Кg		06/12	2/21 11:30	06/12/21 19	:49	
Toluene	<0.00200	U	0.002	00	mg	Кg		06/12	2/21 11:30	06/12/21 19	:49	
Ethylbenzene	<0.00200	U	0.002	00	mg	Кg		06/12	2/21 11:30	06/12/21 19	:49	
m-Xylene & p-Xylene	<0.00400	U	0.004	00	mg	ΊKg		06/12	2/21 11:30	06/12/21 19	:49	
o-Xylene	<0.00200	U	0.002	00	mg	Кg		06/12	2/21 11:30	06/12/21 19	:49	
Xylenes, Total	<0.00400	U	0.004	00	mg	ΊKg		06/12	2/21 11:30	06/12/21 19	:49	
Total BTEX	<0.00400	U	0.004	00	mg	Кg		06/12	2/21 11:30	06/12/21 19	:49	
	MB	МВ										
Surrogate	%Recovery	Qualifier	Limits					Pr	repared	Analyze	1	Dil Fa
4-Bromofluorobenzene (Surr)	90		70 - 130	)				06/12	2/21 11:30	06/12/21 19	:49	
1,4-Difluorobenzene (Surr)	92		70 - 130	0				06/12	2/21 11:30	06/12/21 19	:49	
Analysis Batch: 4044			Spike	LCS	LCS					Prep Ty Prep %Rec.		n: 404
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits		
Benzene			0.100	0.1007		mg/Kg			101	70 - 130		
Toluene			0.100	0.09649		mg/Kg			96	70 - 130		
Ethylbenzene			0.100	0.1005		mg/Kg			101	70 - 130		
m-Xylene & p-Xylene			0.200	0.2175		mg/Kg			109	70 - 130		
o-Xylene			0.100	0.1095		mg/Kg			109	70 - 130		
	LCS LCS	3										
Surrogate	%Recovery Qua	alifier	Limits									
4-Bromofluorobenzene (Surr)	115		70 - 130									
1,4-Difluorobenzene (Surr)	104		70 - 130									
Lab Sample ID: LCSD 880-4	041/2-A					CI	ient S	Sam	ple ID: L	ab Control	Samp	le Du
Matrix: Solid										Prep Ty		
Analysis Batch: 4044												n: 404
-			Spike	LCSD	LCSD					%Rec.		RP
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits	RPD	Lim
Benzene			0.100	0.09597		mg/Kg			96	70 - 130	5	3
Toluene			0.100	0.09182		mg/Kg			92	70 - 130	5	3
Ethylbenzene			0.100	0.09593		mg/Kg			96	70 _ 130	5	3
m-Xylene & p-Xylene			0.200	0.2070		mg/Kg			104	70 - 130	5	3
- Video -			0.400	0 40 4 4					404	70 100	_	

Eurofins Xenco, Carlsbad

o-Xylene

Surrogate

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

0.100

Limits

70 - 130

70 - 130

LCSD LCSD

%Recovery Qualifier

115

104

0.1044

mg/Kg

104

70 - 130

5

35

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

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

Lab Sample ID: MB 880-4071/1	- <b>A</b>							Client Sa	ample ID: Me		
Matrix: Solid									Prep Typ		
Analysis Batch: 4067									Prep E	Batch	: 4071
A web de		MB Qualifier	RL		Unit			Dremered	Analyzad		
Analyte Gasoline Range Organics	Kesuit <50.0		<b>RL</b> 50.0				<u>D</u>	Prepared 06/13/21 10:54	Analyzed 06/13/21 23:2	<u> </u>	Dil Fa
GRO)-C6-C10	<50.0	0	50.0		mg/Ko	J	,	JO/13/21 10.34	00/13/21 23.2	23	
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg	1	(	06/13/21 10:54	06/13/21 23:2	23	
C10-C28)											
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Ko	3	(	06/13/21 10:54	06/13/21 23:2	23	
Total TPH	<50.0	U	50.0		mg/Kg	]	(	06/13/21 10:54	06/13/21 23:2	23	
	MB	МВ									
Surrogate	%Recovery		Limits					Prepared	Analyzed		Dil Fa
-Chlorooctane	<u>% (ccovery</u> 88		70 - 130				_	06/13/21 10:54	06/13/21 23:2	23	Diria
-Terphenyl	80		70 - 130					06/13/21 10:54	06/13/21 23:2		
Telphenyi			70 - 700					0/10/21 10.04	00,10,21,20.1		
ab Sample ID: LCS 880-4071/2	2-A						Cli	ent Sample	ID: Lab Cont	rol S	ampl
Matrix: Solid									Prep Typ		
Analysis Batch: 4067									Prep E		
			Spike	LCS	LCS				• %Rec.		
nalyte			Added	Result	Qualifier	Unit		D %Rec	Limits		
asoline Range Organics			1000000	930.4	*_	mg/Kg		0.09	70 - 130		
GRO)-C6-C10											
iesel Range Organics (Over			100000	996.5	*_	mg/Kg		0.1	70 - 130		
:10-C28)											
	LCS LCS	;									
Surrogate		) Alifier	Limits								
			Limits 70 - 130								
-Chlorooctane	%Recovery Qua										
-Chlorooctane -Terphenyl	%Recovery Qua 94 79		70 - 130								
-Chlorooctane -Terphenyl .ab Sample ID: LCSD 880-4071	%Recovery Qua 94 79		70 - 130			Clie	ent S	ample ID: L	ab Control S		
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid	%Recovery Qua 94 79		70 - 130			Clie	ent S	ample ID: L	Prep Typ	e: To	tal/N
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid	%Recovery Qua 94 79		70 - 130 70 - 130			Clie	ent S	ample ID: L	Prep Typ Prep E	e: To	tal/N : 407
-Chlorooctane -Terphenyl .ab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067	%Recovery Qua 94 79		70 - 130 70 - 130 <b>Spike</b>		LCSD		ent S	-	Prep Typ Prep E %Rec.	e: To Batch	tal/N : 407 RP
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067	%Recovery Qua 94 79		70 - 130 70 - 130 Spike Added	Result	Qualifier	Unit	ent S	D %Rec	Prep Typ Prep E %Rec. Limits	e: To Batch RPD	tal/N : 407 RP Lim
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Malyte Gasoline Range Organics	%Recovery Qua 94 79		70 - 130 70 - 130 <b>Spike</b>		Qualifier		ent S	-	Prep Typ Prep E %Rec.	e: To Batch	tal/N : 407 RP Lim
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Malyte Gasoline Range Organics GRO)-C6-C10	%Recovery Qua 94 79		70 - 130 70 - 130 Spike Added 1000000	Result 904.4	Qualifier *-	Unit mg/Kg	ent S	<b>D %Rec</b> 0.09 −	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	tal/N : 407 RP Lim
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over	%Recovery Qua 94 79		70 - 130 70 - 130 Spike Added	Result	Qualifier *-	Unit	ent S	D %Rec	Prep Typ Prep E %Rec. Limits	e: To Batch RPD	tal/N : 407 RP Lim
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Malyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over	%Recovery Qua 94 79 1/3-A	lifier	70 - 130 70 - 130 Spike Added 1000000	Result 904.4	Qualifier *-	Unit mg/Kg	ent S	<b>D %Rec</b> 0.09 −	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	tal/N : 407 RP Lim 2
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	%Recovery Qua 94 79 1/3-A	SD	70 - 130 70 - 130 Spike Added 1000000	Result 904.4	Qualifier *-	Unit mg/Kg	ent S	<b>D %Rec</b> 0.09 −	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	tal/N : 407 RP Lim 2
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	%Recovery Qua 94 79 1/3-A <i>LCSD LCS</i> %Recovery Qua	SD	70 - 130 70 - 130 Spike Added 1000000 1000000	Result 904.4	Qualifier *-	Unit mg/Kg	ent S	<b>D %Rec</b> 0.09 −	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	tal/N : 407 RP Lim
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate -Chlorooctane	%Recovery     Qua       94     94       79     1/3-A       LCSD     LCS       %Recovery     Qua       89     20	SD	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4	Qualifier *-	Unit mg/Kg	ent S	<b>D %Rec</b> 0.09 −	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	tal/N : 407 RP Lim 2
-Chlorooctane -Terphenyl ab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 malyte Basoline Range Organics GRO)-C6-C10 Biesel Range Organics (Over 10-C28) Murrogate -Chlorooctane	%Recovery Qua 94 79 1/3-A <i>LCSD LCS</i> %Recovery Qua	SD	70 - 130 70 - 130 Spike Added 1000000 1000000	Result 904.4	Qualifier *-	Unit mg/Kg	ent S	<b>D %Rec</b> 0.09 −	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	tal/N : 407 RP Lim
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Malysis Batch: 4067	%Recovery     Qua       94     94       79     1/3-A       LCSD     LCS       %Recovery     Qua       89     78	SD	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4	Qualifier *-	Unit mg/Kg	ent S	<b>D %Rec</b> 0.09 −	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	tal/N : 407 RP Lim
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Malysis Batch: 4067	%Recovery 94Qua94791/3-A1/3-ALCSD %Recovery 89 78LCS Qua89 7820n Chromatogr1/3	SD	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4	Qualifier *-	Unit mg/Kg	ent S	D %Rec 0.09 - 0.1	Prep Typ Prep E %Rec. Limits 70 - 130 70 - 130	e: To Batch RPD 3 1	otal/N : 407 RP Lim 2
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate -Chlorooctane -Terphenyl ethod: 300.0 - Anions, Ior Lab Sample ID: MB 880-4076/1	%Recovery 94Qua94791/3-A1/3-ALCSD %Recovery 89 78LCS Qua89 7820n Chromatogr1/3	SD	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4	Qualifier *-	Unit mg/Kg	ent S	D %Rec 0.09 - 0.1	Prep Typ Prep E %Rec. Limits 70 - 130 70 - 130	e: To Batch RPD 3 1 thod	stal/N : 407 RP Lim 2 2 Blan
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over 210-C28) Surrogate -Chlorooctane -Terphenyl ethod: 300.0 - Anions, Ior Lab Sample ID: MB 880-4076/14 Matrix: Solid	%Recovery 94Qua94791/3-A1/3-ALCSD %Recovery 89 78LCS Qua89 7820n Chromatogr1/3	SD	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4	Qualifier *-	Unit mg/Kg	ent S	D %Rec 0.09 - 0.1	Prep Typ Prep E %Rec. Limits 70 - 130 70 - 130	e: To Batch RPD 3 1 thod	tal/N : 407 RP Lim 2 2
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Malysis Batch: 4067 malyte Lasoline Range Organics GRO)-C6-C10 liesel Range Organics (Over 10-C28) Murrogate -Chlorooctane -Terphenyl ethod: 300.0 - Anions, lor Lab Sample ID: MB 880-4076/14 Matrix: Solid	%Recovery     Qua       94     94       79     79       1/3-A     LCSD       %Recovery     Qua       89     78       n Chromatogr       -A	SD SD SI SD ST SD SD ST SD SD ST SD SD SD SD SD SD SD SD SD SD SD SD SD	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4	Qualifier *-	Unit mg/Kg	ent S	D %Rec 0.09 - 0.1	Prep Typ Prep E %Rec. Limits 70 - 130 70 - 130	e: To Batch RPD 3 1 thod	tal/N. : 407 RP Lim 2 2 2
Surrogate Chlorooctane Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate Chlorooctane Terphenyl ethod: 300.0 - Anions, Ior Lab Sample ID: MB 880-4076/1- Matrix: Solid Analysis Batch: 4082 Analyte	%Recovery     Qua       94     94       79     1/3-A       LCSD     LCS       %Recovery     Qua       89     78       78     Recovery       A     MB	SD	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4	Qualifier *-	Unit mg/Kg	ent S	D %Rec 0.09 - 0.1	Prep Typ Prep E %Rec. Limits 70 - 130 70 - 130	e: To Batch RPD 3 1 thod	tal/NJ : 407 RP Lim 2 2 8

Eurofins Xenco, Carlsbad

Job ID: 890-801-1

6/14/2021

# QC Sample Results

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H Job ID: 890-801-1

#### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-4076/2-A Matrix: Solid					Client	Sample	ID: Lab Co Prep	ontrol S Type: S	
Analysis Batch: 4082	Spike	201	LCS				%Rec.		
Analyte	Added		Qualifier	Unit	D	%Rec	Limits		
Chloride	250	244.4		mg/Kg		98	90 - 110		
- Lab Sample ID: LCSD 880-4076/3-A				Clier	nt Sam	ple ID: I	Lab Contro	I Sampl	e Dup
Materia Oalta								Type: S	
Matrix: Solid								1900.0	oluble
Analysis Batch: 4082								1900.0	oluble
	Spike	LCSD	LCSD				%Rec.	1900.0	RPD
	Spike Added		LCSD Qualifier	Unit	D	%Rec		RPD	

# **QC Association Summary**

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H Job ID: 890-801-1

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**8** 9

#### **GC VOA**

#### Prep Batch: 4041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-801-1	PH10	Total/NA	Solid	5035	
890-801-2	PH10A	Total/NA	Solid	5035	
MB 880-4041/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-4041/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-4041/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
nalysis Batch: 4044					
	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
nalysis Batch: 4044 Lab Sample ID 890-801-1	Client Sample ID PH10	Prep Type Total/NA	Matrix Solid	Method 8021B	Prep Batch
Lab Sample ID 890-801-1					
Lab Sample ID 890-801-1 890-801-2	PH10	Total/NA	Solid	8021B	404 <sup>-</sup> 404 <sup>-</sup>
Lab Sample ID	PH10 PH10A	Total/NA Total/NA	Solid Solid	8021B 8021B	404

#### GC Semi VOA

#### Analysis Batch: 4067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-801-1	PH10	Total/NA	Solid	8015B NM	4071
890-801-2	PH10A	Total/NA	Solid	8015B NM	4071
MB 880-4071/1-A	Method Blank	Total/NA	Solid	8015B NM	4071
LCS 880-4071/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	4071
LCSD 880-4071/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	4071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-801-1	PH10	Total/NA	Solid	8015NM Prep	
890-801-2	PH10A	Total/NA	Solid	8015NM Prep	
MB 880-4071/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-4071/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-4071/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

#### HPLC/IC

#### Leach Batch: 4076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
890-801-1	PH10	Soluble	Solid	DI Leach
890-801-2	PH10A	Soluble	Solid	DI Leach
MB 880-4076/1-A	Method Blank	Soluble	Solid	DI Leach
LCS 880-4076/2-A	Lab Control Sample	Soluble	Solid	DI Leach
LCSD 880-4076/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach

#### Analysis Batch: 4082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-801-1	PH10	Soluble	Solid	300.0	4076
890-801-2	PH10A	Soluble	Solid	300.0	4076
MB 880-4076/1-A	Method Blank	Soluble	Solid	300.0	4076
LCS 880-4076/2-A	Lab Control Sample	Soluble	Solid	300.0	4076
LCSD 880-4076/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	4076
# Lab Chronicle

Job ID: 890-801-1

#### Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

#### **Client Sample ID: PH10** Date Collected: 06/11/21 09:01

Date Received: 06/11/21 11:31 Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab 5035 XEN MID Total/NA Prep 4041 06/12/21 11:30 KL Total/NA Analysis 8021B 1 4044 06/12/21 22:53 KL XEN MID Total/NA Prep 8015NM Prep 4071 06/13/21 10:54 AM XEN MID Total/NA Analysis 8015B NM 1 4067 06/14/21 03:12 AJ XEN MID XEN MID Soluble Leach DI Leach 4076 06/14/21 09:53 СН Soluble Analysis 300.0 1 4082 06/14/21 12:36 СН XEN MID

#### **Client Sample ID: PH10A** Date Collected: 06/11/21 09:05 Date Received: 06/11/21 11:31

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4041	06/12/21 11:30	KL	XEN MID
Total/NA	Analysis	8021B		1	4044	06/12/21 23:14	KL	XEN MID
Total/NA	Prep	8015NM Prep			4071	06/13/21 10:54	AM	XEN MID
Total/NA	Analysis	8015B NM		1	4067	06/14/21 03:33	AJ	XEN MID
Soluble	Leach	DI Leach			4076	06/14/21 09:53	СН	XEN MID
Soluble	Analysis	300.0		1	4082	06/14/21 12:42	СН	XEN MID

#### Laboratory References:

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

#### Lab Sample ID: 890-801-1 Matrix: Solid

Lab Sample ID: 890-801-2

Matrix: Solid

Accreditation/Certification Summary

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

Laboratory: Eurofins Xenco, Midland

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

uthority	F	Program	Identification Number	Expiration Date
exas	N	IELAP	T104704400-20-21	06-30-21
• ,		but the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes fo
the agency does not o Analysis Method	fer certification. Prep Method	Matrix	Analyte	
6 ,		Matrix Solid	Analyte Total TPH	

10

Job ID: 890-801-1

# **Method Summary**

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H Job ID: 890-801-1

Method	Method Description	Protocol	Laboratory	
8021B	Volatile Organic Compounds (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.

#### Laboratory References:

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

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# Sample Summary

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H Job ID: 890-801-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-801-1	PH10	Solid	06/11/21 09:01	06/11/21 11:31	- 1
890-801-2	PH10A	Solid	06/11/21 09:05	06/11/21 11:31	- 2

ved by OC	C <b>D</b> :	6/16/20	21 8:5	1:52	AM																				Pa	ge 14	19 0
5 all	Relinquished by: (Signature)	wonce: signature of this of service. Xenco will b of Xenco. A minimum cl	Total 200.7 / 6010 Circle Method(s) :						PH10A	PH10	Sample Identification	Cooler Custody Seals: Sample 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:		X	
Carl	y: (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 contro 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.	otal 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed						0A 5	10 5		Yes No	(Yes) N	2.4/3.2	EIPT Temp Blank:	Travis Casey			PLU 18 BD 161H	(432) 704-5178	Midland, TX 79705	3300 North A St. Bldg 1, Unit 222	WSP USA Inc., Permian office	Kalei Jennings		XIIZOO	
V. Au	Received b	ent of samples constitut amples and shall not as ed to each project and a	В В						6-11-21	6-11-21	Matrix Date Sampled	N/A Correc	1N		ank: Yes No							dg 1, Unit 222	rmian office		Hobbs,N		
M	Received by: (Signature)	es a valid purchase order f sume any responsibility fo charge of S5 for each sam	8RCRA 13PPM Texas 11 AI TCLP / SPLP 6010: 8RCRA		_				0905 2'	10901 1	Time Depth Sampled	Total Containers:		Thermometer ID	Wet Ice: Yes No	Due Date:	Rush: 24hr	Routine	Turn Around	Email: travis.ca	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800)	Houston, TX (281) 24	
6/11/4/1	Date/Tjme	rom client company to Xe r any losses or expenses ple submitted to Xenco, b	sp Sp				V		- ~ ~		Numbo TPH (E	er of Co PA 8015 EPA 802	)	iners						Email: travis.casey@wsp.com, kalei.jennings@wsp.com,	ZIP: Carlsbad, NM	3104 E Greene St.	Name: XTO Energy	ifferent) Kyle Littrell	75-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (8	Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX	Chain c
11:31 <sup>2</sup>	e Reling	nco, its affiliates and su incurred by the client if s rt not analyzed. These to	Be B Cd Ca Be Cd Cr Co						<			le (EPA	300.0	))						i.jennings@wsp.c	M	eene St.	9y		Atlanta,GA (770-449-8	902-0300 San Antoni	Chain of Custody
	Relinquished by: (Signature)		Cr Co Cu Fe Pb Cu Pb Mn Mo M								890-801 Chain of		111111 In Inc.	_				-	ANALYSIS REQUEST	om, dan.moir@v					3800) Tampa,FL (813-620-2000)	o,TX (210) 509-3334	Y
		tractors. It assigns standard terms and conditions losses are due to circumstances beyond the control will be enforced unless previously negotiated.	Co Cu Fe Pb Mg Mn Mo Ni Pb Mn Mo Ni Se Ag Ti U						/	ustody Will									EST	Deliverables: EDD	Reporting:Level II evel III	State of Project:	Program: UST/PST		320-2000)		
	Received by: (Signature)	nditions e control ed.	K Se Ag SiO2 1						/	+	-		_										ST PRP prownfields	Work Order Comments	www.xenco.com		Work Order No:
			Na Sr TI Sn U V Zn 1631/245.1/7470/7471:Hg			-			Composite	Composite	Sample Comments	TAT starts the day received by the lab, if received by 4:30pm		API:30-015-44897	AFE:DD.2017.01793.CAP.CM	CC:1665771001/1632501001	nAPP203655261	IN:nAPP2102246632/	Work Order Notes	ADaPT D Other:	<sup>−</sup> PRP	]	Å	Comments	Page L	8	lo:
	Date/Time		V Zn 0 /7471 : Hg	/							omments	/ recevied by the d by 4:30pm		97	1793.CAP.CN	1/1632501001	-	16632/	er Notes						of	7	

# Received by OCD: 6/16/2021 8:51:52 AM



# Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 801 List Number: 1 Creator: Ordonez, Gabby

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		ĺ
Samples were received on ice.	True		ï
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		ŝ
Samples are received within Holding Time (excluding tests with immediate HTs)	True		Į
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		

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

14

Job Number: 890-801-1

List Source: Eurofins Xenco, Carlsbad

The cooler's custody seal, if present, is intact.

The cooler or samples do not appear to have been compromised or

There are no discrepancies between the containers received and the COC.

Samples are received within Holding Time (excluding tests with immediate

There is sufficient vol. for all requested analyses, incl. any requested

Containers requiring zero headspace have no headspace or bubble is

Sample custody seals, if present, are intact.

## Login Sample Receipt Checklist

Answer

True

True

True

True True

True

True

True

True

N/A

True

Comment

Client: WSP USA Inc.

Login Number: 801

Creator: Kramer, Jessica

Samples were received on ice.

Cooler Temperature is acceptable. Cooler Temperature is recorded.

COC is filled out in ink and legible.

Sample containers have legible labels.

Containers are not broken or leaking.

Sample bottles are completely filled.

Sample Preservation Verified.

Sample collection date/times are provided.

Appropriate sample containers are used.

COC is filled out with all pertinent information.

Is the Field Sampler's name present on COC?

List Number: 2

tampered with.

COC is present.

HTs)

MS/MSDs

<6mm (1/4").

Question

Job Number: 890-801-1

14

List Source: Eurofins Xenc	o, Midland
List Creation: 06/12/2	04:19 PM

Page	18	of	18
гауе	10	OI.	10

Received by OCD: 6/16/2021 8:51:52 AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-802-1

Client Project/Site: PLU 18 BD 161H

# For:

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

Attn: Dan Moir

NRAMER

Authorized for release by: 6/14/2021 4:11:48 PM

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

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

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

LINKS **Review your project** results through Total Access **Have a Question?** Ask-The Expert Visit us at: www.eurofinsus.com/Env

Released to Imaging: 7/13/2021 2:49:23 PM

Laboratory Job ID: 890-802-1

2

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# **Definitions/Glossary**

Client: WSP USA Inc.
Project/Site: PLU 18 BD 161H

Job ID: 890-802-1

Project/Site: PL		202-1
Qualifiers		<u> </u>
GC VOA Qualifier	Qualifier Description	4
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VOA		5
Qualifier	Qualifier Description	
*_	LCS and/or LCSD is outside acceptance limits, low biased.	6
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	8
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	1
%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 DL	Dilution Factor	
DL DL, RA, RE, IN	Detection Limit (DoD/DOE) 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	
	Not Calculated	
ND NEG	Not Detected at the reporting limit (or MDL or EDL if shown) Negative / Absent	
POS	Positive / Absent	
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	

TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Toxicity Equivalent Factor (Dioxin)

TEF

# **Case Narrative**

#### Job ID: 890-802-1

## Job ID: 890-802-1

#### Laboratory: Eurofins Xenco, Carlsbad

#### Narrative

Job Narrative 890-802-1

#### Receipt

The samples were received on 6/11/2021 11:31 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 3.2°C

#### **Receipt Exceptions**

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: PH12 (890-802-1) and PH12A (890-802-2).

#### GC VOA

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

#### GC Semi VOA

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

#### HPLC/IC

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

RL

0.00198

0.00198

0.00198

0.00397

0.00198

0.00397

0.00397

Limits

70 - 130

70 - 130

RL

49.9

49.9

49.9

49.9

Limits

70 - 130

70 - 130

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

D

Prepared

06/12/21 11:30

06/12/21 11:30

06/12/21 11:30

06/12/21 11:30

06/12/21 11:30

06/12/21 11:30

06/12/21 11:30

Prepared

06/12/21 11:30

06/12/21 11:30

Prepared

06/13/21 10:54

06/13/21 10:54

06/13/21 10:54

06/13/21 10:54

Prepared

06/13/21 10:54

06/13/21 10:54

Job ID: 890-802-1

# Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

# Client Sample ID: PH12

Date Collected: 06/11/21 08:39 Date Received: 06/11/21 11:31

Sample Depth: - 1

Analyte

Benzene

Toluene

o-Xylene

Ethylbenzene

Xylenes, Total

Total BTEX

Surrogate

Analyte

C10-C28)

(GRO)-C6-C10

m-Xylene & p-Xylene

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Gasoline Range Organics

Diesel Range Organics (Over

# Lab Sample ID: 890-802-1

Analyzed

06/13/21 00:35

06/13/21 00:35

06/13/21 00:35

06/13/21 00:35

06/13/21 00:35

06/13/21 00:35

06/13/21 00:35

Analyzed

06/13/21 00:35

06/13/21 00:35

Analyzed

06/14/21 03:54

06/14/21 03:54

06/14/21 03:54

06/14/21 03:54

Analyzed

06/14/21 03:54

06/14/21 03:54

Lab Sample ID: 890-802-2

Dil Fac

Matrix: Solid

1

Matrix: Solid

802-1	
Solid	
	5
Dil Fac	
1	
1	
1	
1	
1	8
1	
1	9
Dil Fac	
1	
1	
Dil Fac 1	
1	13

Oll Range Organics (Over C28-C36)	<49.9	U
Total TPH	<49.9	U
Surrogate	%Recovery	Qualifier
1-Chlorooctane	80	
o-Terphenyl	73	

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

Method: 8021B - Volatile Organic Compounds (GC)

Result Qualifier

<0.00198 U

<0.00198 U

<0.00198 U

<0.00397 U

<0.00198 U

<0.00397 U

<0.00397 U

85 97

Result Qualifier

<49.9 U\*-

<49.9 U\*-

%Recovery

Qualifier

# Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Q	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.05 U	J	5.05	mg/Kg			06/14/21 12:47	1

#### Client Sample ID: PH12A Date Collected: 06/11/21 08:42

Date Received: 06/11/21 11:31

Sample Depth: - 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00199	U	0.00199	mg/Kg		06/12/21 11:30	06/13/21 00:56	1
Toluene	<0.00199	U	0.00199	mg/Kg		06/12/21 11:30	06/13/21 00:56	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		06/12/21 11:30	06/13/21 00:56	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		06/12/21 11:30	06/13/21 00:56	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		06/12/21 11:30	06/13/21 00:56	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		06/12/21 11:30	06/13/21 00:56	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		06/12/21 11:30	06/13/21 00:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130			06/12/21 11:30	06/13/21 00:56	1
1,4-Difluorobenzene (Surr)	95		70 - 130			06/12/21 11:30	06/13/21 00:56	1

# **Client Sample Results**

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

## Client Sample ID: PH12A

Date Collected: 06/11/21 08:42 Date Received: 06/11/21 11:31

Sample Depth: - 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U *-	49.9	mg/Kg		06/13/21 10:54	06/14/21 04:15	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U *-	49.9	mg/Kg		06/13/21 10:54	06/14/21 04:15	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/13/21 10:54	06/14/21 04:15	1
Total TPH	<49.9	U	49.9	mg/Kg		06/13/21 10:54	06/14/21 04:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130			06/13/21 10:54	06/14/21 04:15	1
o-Terphenyl	78		70 - 130			06/13/21 10:54	06/14/21 04:15	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.05		5.05	mg/Kg			06/14/21 12:53	1

Eurofins Xenco, Carlsbad

**Released to Imaging:** 7/13/2021 2:49:23 PM

Job ID: 890-802-1

Matrix: Solid

Lab Sample ID: 890-802-2

# Job ID: 890-802-1

# 6 Prep Type: Total/NA

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

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-802-1	PH12	85	97	
890-802-2	PH12A	86	95	
LCS 880-4041/1-A	Lab Control Sample	115	104	
LCSD 880-4041/2-A	Lab Control Sample Dup	115	104	
MB 880-4041/5-A	Method Blank	90	92	

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID 890-802-1	Client Sample ID PH12	(70-130) 80	(70-130) 73	
890-802-2	PH12A	85	78	
LCS 880-4071/2-A	Lab Control Sample	94	79	
LCSD 880-4071/3-A	Lab Control Sample Dup	89	78	
MB 880-4071/1-A	Method Blank	88	80	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Prep Type: Total/NA

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# **QC Sample Results**

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

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

Lab Sample ID: MB 880-4047	I/5-A								Client Sa	ample ID: M		
Matrix: Solid										Prep Ty		
Analysis Batch: 4044										Prep	Batch	n: 4041
	MB											
Analyte	Result	Qualifier	I	RL	Uni	t	D	Pr	repared	Analyze	i	Dil Fa
Benzene	<0.00200	U	0.002	00	mg	Кg		06/12	2/21 11:30	06/12/21 19	:49	
Toluene	<0.00200	U	0.002	00	mg	Кg		06/12	2/21 11:30	06/12/21 19	:49	
Ethylbenzene	<0.00200	U	0.002	00	mg	Кg		06/12	2/21 11:30	06/12/21 19	:49	
m-Xylene & p-Xylene	<0.00400	U	0.004	00	mg	ΊKg		06/12	2/21 11:30	06/12/21 19	:49	
o-Xylene	<0.00200	U	0.002	00	mg	Кg		06/12	2/21 11:30	06/12/21 19	:49	
Xylenes, Total	<0.00400	U	0.004	00	mg	ΊKg		06/12	2/21 11:30	06/12/21 19	:49	
Total BTEX	<0.00400	U	0.004	00	mg	Кg		06/12	2/21 11:30	06/12/21 19	:49	
	MB	МВ										
Surrogate	%Recovery	Qualifier	Limits					Pr	repared	Analyze	1	Dil Fa
4-Bromofluorobenzene (Surr)	90		70 - 130	)				06/12	2/21 11:30	06/12/21 19	:49	
1,4-Difluorobenzene (Surr)	92		70 - 130	0				06/12	2/21 11:30	06/12/21 19	:49	
Analysis Batch: 4044			Spike	LCS	LCS					Prep %Rec.	Batch	n: 404
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits		
Benzene			0.100	0.1007		mg/Kg			101	70 - 130		
Toluene			0.100	0.09649		mg/Kg			96	70 - 130		
Ethylbenzene			0.100	0.1005		mg/Kg			101	70 - 130		
m-Xylene & p-Xylene			0.200	0.2175		mg/Kg			109	70 - 130		
o-Xylene			0.100	0.1095		mg/Kg			109	70 - 130		
	LCS LCS	6										
Surrogate	%Recovery Qua	alifier	Limits									
4-Bromofluorobenzene (Surr)	115		70 - 130									
1,4-Difluorobenzene (Surr)	104		70 - 130									
Lab Sample ID: LCSD 880-4	041/2-A					CI	ient S	Sam	ple ID: L	ab Control	Samp	le Du
Matrix: Solid										Prep Ty		
Analysis Batch: 4044												n: 404
			Spike	LCSD	LCSD					%Rec.		RP
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits	RPD	Lim
Benzene			0.100	0.09597		mg/Kg			96	70 - 130	5	3
Toluene			0.100	0.09182		mg/Kg			92	70 - 130	5	3
Ethylbenzene			0.100	0.09593		mg/Kg			96	70 - 130	5	3
m-Xylene & p-Xylene			0.200	0.2070		mg/Kg			104	70 - 130	5	3
X I			0.400	0 4044					404	70 400	_	~

o-Xylene

0.100

0.1044

mg/Kg

104

70 - 130

5

35

Job ID: 890-802-1

# **QC Sample Results**

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

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

Lab Sample ID: MB 880-4071/1	-A							Client Sa	mple ID: Me		
Matrix: Solid									Prep Typ		
Analysis Batch: 4067									Prep E	Batch	n: <b>407</b> ′
		MB									
Analyte		Qualifier	RL 50.0		Unit			repared 3/21 10:54	Analyzed 06/13/21 23:2		Dil Fa
Basoline Range Organics GRO)-C6-C10	<50.0	U	50.0		mg/Kg	1	06/1	3/21 10.54	00/13/21 23.	23	
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg	a a a a a a a a a a a a a a a a a a a	06/1	3/21 10:54	06/13/21 23:	23	
C10-C28)					5.	,					
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg	9	06/1	3/21 10:54	06/13/21 23:	23	
otal TPH	<50.0	U	50.0		mg/Kg	3	06/1	3/21 10:54	06/13/21 23:	23	
	МР	МВ									
			Lingita					vonovod	Amelymed		
Currogate -Chlorooctane	%Recovery 88		Limits 70 - 130					repared 3/21 10:54	Analyzed 06/13/21 23:	<u> </u>	Dil Fa
	80		70 - 130 70 - 130					3/21 10:54 3/21 10:54	06/13/21 23:		
-Terphenyl	80		70 - 130				00/1	3/21 10.54	00/13/21 23.	23	
ab Sample ID: LCS 880-4071/2	2-4						Client	Sample	ID: Lab Cont	rol S	amn
Aatrix: Solid							onom	oumpio	Prep Typ		
Analysis Batch: 4067									Prep E		
			Spike	LCS	LCS				%Rec.	Juiton	
nalyte			Added		Qualifier	Unit	D	%Rec	Limits		
asoline Range Organics			1000000	930.4	-	mg/Kg		0.09	70 - 130		
GRO)-C6-C10											
iesel Range Organics (Over			1000000	996.5	*_	mg/Kg		0.1	70 - 130		
10-C28)											
	LCS LCS	\$									
urrogate	LCS LCS %Recovery Qua		Limits								
		S alifier	Limits 70 - 130								
Chlorooctane	%Recovery Qua										
-Chlorooctane	%Recovery Qua		70 - 130								
-Chlorooctane -Terphenyl	%Recovery 94 94 79		70 - 130			Clie	ent Sam	iple ID: La	ab Control S	amp	le Du
-Chlorooctane -Terphenyl .ab Sample ID: LCSD 880-4071	%Recovery 94 94 79		70 - 130			Clie	ent Sam	iple ID: Li	ab Control S Prep Typ		
-Chlorooctane -Terphenyl .ab Sample ID: LCSD 880-4071 Matrix: Solid	%Recovery 94 94 79		70 - 130			Clie	ent Sam	iple ID: Li		e: To	otal/N
-Chlorooctane -Terphenyl .ab Sample ID: LCSD 880-4071 Matrix: Solid	%Recovery 94 94 79		70 - 130	LCSD	LCSD	Clie	ent Sam	iple ID: Li	Ргер Тур	e: To	otal/N n: 407
-Chlorooctane -Terphenyl ab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067	%Recovery 94 94 79		70 - 130 70 - 130		LCSD Qualifier	Clie	ent Sam	NPIE ID: L	Prep Typ Prep E	e: To	otal/N n: 407 RF
-Chlorooctane -Terphenyl .ab Sample ID: LCSD 880-407 Matrix: Solid Analysis Batch: 4067 	%Recovery 94 94 79		70 - 130 70 - 130 Spike		Qualifier			-	Prep Typ Prep E %Rec.	e: To Batch	otal/N n: 407 RF Lim
-Chlorooctane -Terphenyl .ab Sample ID: LCSD 880-4074 Matrix: Solid Analysis Batch: 4067 	%Recovery 94 94 79		70 - 130 70 - 130 Spike Added 1000000	Result 904.4	Qualifier *-	Unit mg/Kg		<b>%Rec</b>	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	otal/N 1: 407 RF Lim
-Chlorooctane -Terphenyl .ab Sample ID: LCSD 880-407 Matrix: Solid Analysis Batch: 4067 malyte sasoline Range Organics GRO)-C6-C10 iesel Range Organics (Over	%Recovery 94 94 79		70 - 130 70 - 130 Spike Added	Result	Qualifier *-	Unit		%Rec	Prep Typ Prep E %Rec. Limits	e: To Batch RPD	otal/N 1: 407 RP Lim
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-407 Matrix: Solid Analysis Batch: 4067 malyte Gasoline Range Organics GRO)-C6-C10 biesel Range Organics (Over	%Recovery 94 94 79		70 - 130 70 - 130 Spike Added 1000000	Result 904.4	Qualifier *-	Unit mg/Kg		<b>%Rec</b>	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	otal/N 1: 407 RP Lim
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-407 Matrix: Solid Analysis Batch: 4067 malyte Gasoline Range Organics GRO)-C6-C10 biesel Range Organics (Over	%Recovery 94 94 79	lifier	70 - 130 70 - 130 Spike Added 1000000	Result 904.4	Qualifier *-	Unit mg/Kg		<b>%Rec</b>	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	otal/N 1: 407 RP Lim
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	%Recovery         Qua           94         94           79         1/3-A	sD	70 - 130 70 - 130 Spike Added 1000000	Result 904.4	Qualifier *-	Unit mg/Kg		<b>%Rec</b>	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	otal/N 1: 407 RP Lim
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Analyte Basoline Range Organics GRO)-C6-C10 biesel Range Organics (Over 210-C28)	<u>%Recovery</u> Qua 94 79 1/3-A 	sD	70 - 130 70 - 130 Spike Added 1000000	Result 904.4	Qualifier *-	Unit mg/Kg		<b>%Rec</b>	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	otal/N 1: 407 RP Lim
Chlorooctane Terphenyl ab Sample ID: LCSD 880-407 latrix: Solid malysis Batch: 4067 nalyte asoline Range Organics GRO)-C6-C10 iesel Range Organics (Over 10-C28) urrogate Chlorooctane	%Recovery Qua 94 79 1/3-A LCSD LCS %Recovery Qua	sD	70 - 130 70 - 130 Spike Added 1000000 1000000	Result 904.4	Qualifier *-	Unit mg/Kg		<b>%Rec</b>	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	otal/N n: 407 RF Lin
-Chlorooctane -Terphenyl ab Sample ID: LCSD 880-4071 fatrix: Solid malysis Batch: 4067 malyte asoline Range Organics GRO)-C6-C10 iesel Range Organics (Over 10-C28) urrogate -Chlorooctane -Terphenyl	%Recovery         Qua           94         94           79         79           1/3-A	SD	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4	Qualifier *-	Unit mg/Kg		<b>%Rec</b>	Prep Typ Prep E %Rec. Limits 70 - 130	e: To Batch RPD 3	otal/N 1: 407 RF Lim
Surrogate -Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4074 Matrix: Solid Analysis Batch: 4067 Analyte Basoline Range Organics GRO)-C6-C10 biesel Range Organics (Over 210-C28) Surrogate -Chlorooctane -Terphenyl ethod: 300.0 - Anions, lor	%Recovery     Quadratic       94     94       79     79       1/3-A	SD	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4	Qualifier *-	Unit mg/Kg	<u> </u>	%Rec 0.09 0.1	Prep Typ Prep E %Rec. Limits 70 - 130 70 - 130	e: To Batch RPD 3 1	otal/N 1: 407 RR Lin
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Malysis Batch: 4067 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over E10-C28) Murrogate -Chlorooctane -Terphenyl ethod: 300.0 - Anions, lor Lab Sample ID: MB 880-4076/1	%Recovery     Quadratic       94     94       79     79       1/3-A	SD	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4	Qualifier *-	Unit mg/Kg	<u> </u>	%Rec 0.09 0.1	Prep Typ Prep E %Rec. Limits 70 - 130 70 - 130	e: To Batch RPD 3 1 thod	btal/N RF Lin : :
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate -Chlorooctane -Terphenyl ethod: 300.0 - Anions, Ior Lab Sample ID: MB 880-4076/1 Matrix: Solid	%Recovery     Quadratic       94     94       79     79       1/3-A	SD	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4	Qualifier *-	Unit mg/Kg	<u> </u>	%Rec 0.09 0.1	Prep Typ Prep E %Rec. Limits 70 - 130 70 - 130	e: To Batch RPD 3 1 thod	btal/N n: 407 RP Lim 2 2
-Chlorooctane -Terphenyl ab Sample ID: LCSD 880-4071 Matrix: Solid Malysis Batch: 4067 malyte asoline Range Organics GRO)-C6-C10 iesel Range Organics (Over 10-C28) urrogate -Chlorooctane -Terphenyl ethod: 300.0 - Anions, lor ab Sample ID: MB 880-4076/1 Matrix: Solid	%Recovery     Quadratic       94     94       79     79       1/3-A	SD alifier raphy	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4	Qualifier *-	Unit mg/Kg	<u> </u>	%Rec 0.09 0.1	Prep Typ Prep E %Rec. Limits 70 - 130 70 - 130	e: To Batch RPD 3 1 thod	btal/N n: 407 RP Lim 2 2
-Chlorooctane -Terphenyl Lab Sample ID: LCSD 880-4071 Matrix: Solid Analysis Batch: 4067 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over 210-C28) Surrogate -Chlorooctane -Terphenyl ethod: 300.0 - Anions, lor Lab Sample ID: MB 880-4076/1	%Recovery     Quadratic       94     94       79     79       1/3-A     LCSD       %Recovery     Quadratic       89     78       78     Chromatogram       -A     MB	SD	70 - 130 70 - 130 Spike Added 1000000 1000000 Limits 70 - 130	Result 904.4 1004	Qualifier *-	Unit mg/Kg mg/Kg	<u> </u>	%Rec 0.09 0.1	Prep Typ Prep E %Rec. Limits 70 - 130 70 - 130	e: To Batch RPD 3 1 thod	Blan

Job ID: 890-802-1

# **QC Sample Results**

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H Job ID: 890-802-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-4076/2-A Matrix: Solid Analysis Batch: 4082					Client	Sample	ID: Lab C Prep	ontrol S Type: S	
Analysis Baton 4002	Spike	LCS	LCS				%Rec.		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	250	244.4		mg/Kg		98	90 - 110		
Lab Sample ID: LCSD 880-4076/3-A				Clie	nt Sam	ple ID:	Lab Contro	ol Sampl	e Dup
Matrix: Solid							Prep	Type: S	oluble
Analysis Batch: 4082									
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	244.2		mg/Kg		98	90 - 110	0	20

**Client Sample ID** 

PH12

PH12A

PH12

PH12A

Method Blank

Lab Control Sample

**Client Sample ID** 

Method Blank

Lab Control Sample

Lab Control Sample Dup

Lab Control Sample Dup

# **QC** Association Summary

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Matrix

Solid

Solid

Solid

Solid

Solid

Matrix

Solid

Solid

Solid

Solid

Solid

Method

5035

5035

5035

5035

5035

Method

8021B

8021B

8021B

8021B

8021B

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

**GC VOA** 

890-802-1

890-802-2

Prep Batch: 4041

MB 880-4041/5-A

LCS 880-4041/1-A

Lab Sample ID

890-802-1

890-802-2

LCSD 880-4041/2-A

Analysis Batch: 4044

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Prep Batch

Prep Batch

4041

4041

4041

4041

4041

Job ID: 890-802-1

# 8 9 10 11

3

GC Semi VOA

MB 880-4041/5-A

LCS 880-4041/1-A

LCSD 880-4041/2-A

#### Analysis Batch: 4067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-802-1	PH12	Total/NA	Solid	8015B NM	4071
890-802-2	PH12A	Total/NA	Solid	8015B NM	4071
MB 880-4071/1-A	Method Blank	Total/NA	Solid	8015B NM	4071
LCS 880-4071/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	4071
LCSD 880-4071/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	4071

#### Prep Batch: 4071

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-802-1	PH12	Total/NA	Solid	8015NM Prep	
890-802-2	PH12A	Total/NA	Solid	8015NM Prep	
MB 880-4071/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-4071/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-4071/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

#### HPLC/IC

#### Leach Batch: 4076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-802-1	PH12	Soluble	Solid	DI Leach	
890-802-2	PH12A	Soluble	Solid	DI Leach	
MB 880-4076/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-4076/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-4076/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

#### Analysis Batch: 4082

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-802-1	PH12	Soluble	Solid	300.0	4076
890-802-2	PH12A	Soluble	Solid	300.0	4076
MB 880-4076/1-A	Method Blank	Soluble	Solid	300.0	4076
LCS 880-4076/2-A	Lab Control Sample	Soluble	Solid	300.0	4076
LCSD 880-4076/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	4076

5

9

# Lab Chronicle

Job ID: 890-802-1

#### Lab Sample ID: 890-802-1 Matrix: Solid

Lab Sample ID: 890-802-2

Matrix: Solid

Date Collected: 06/11/21 08:39 Date Received: 06/11/21 11:31

Project/Site: PLU 18 BD 161H
Client Sample ID: PH12

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4041	06/12/21 11:30	KL	XEN MID
Total/NA	Analysis	8021B		1	4044	06/13/21 00:35	KL	XEN MID
Total/NA	Prep	8015NM Prep			4071	06/13/21 10:54	AM	XEN MID
Total/NA	Analysis	8015B NM		1	4067	06/14/21 03:54	AJ	XEN MID
Soluble	Leach	DI Leach			4076	06/14/21 09:53	СН	XEN MID
Soluble	Analysis	300.0		1	4082	06/14/21 12:47	СН	XEN MID

#### Client Sample ID: PH12A Date Collected: 06/11/21 08:42 Date Received: 06/11/21 11:31

_	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4041	06/12/21 11:30	KL	XEN MID
Total/NA	Analysis	8021B		1	4044	06/13/21 00:56	KL	XEN MID
Total/NA	Prep	8015NM Prep			4071	06/13/21 10:54	AM	XEN MID
Total/NA	Analysis	8015B NM		1	4067	06/14/21 04:15	AJ	XEN MID
Soluble	Leach	DI Leach			4076	06/14/21 09:53	СН	XEN MID
Soluble	Analysis	300.0		1	4082	06/14/21 12:53	СН	XEN MID

#### Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H

Laboratory: Eurofins Xenco, Midland

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

thority		rogram	Identification Number	Expiration Date
exas	N	ELAP	T104704400-20-21	06-30-21
The following analyte	are included in this report	ut the laboratory is not certif	ied by the governing authority. This list ma	av include analytes for which
the agency does not o	offer certification.	,	, , , , ,	ay include analytes for white
• ,		Matrix Solid	Analyte Total TPH	

Eurofins Xenco, Carlsbad

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Job ID: 890-802-1

# **Method Summary**

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H Job ID: 890-802-1

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Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
035	Closed System Purge and Trap	SW846	XEN MID
015NM Prep	Microextraction	SW846	XEN MID
OI 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.

#### Laboratory References:

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

# Sample Summary

Client: WSP USA Inc. Project/Site: PLU 18 BD 161H Job ID: 890-802-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-802-1	PH12	Solid	06/11/21 08:39	06/11/21 11:31	- 1
890-802-2	PH12A	Solid	06/11/21 08:42	06/11/21 11:31	- 2

Address:         Stoth Mark AS, Blag L, Unit 222         Address:         On CE Green SL.         State of Project: Num         Num         State of Project: Num         Num         State of Project: Num         Nu	Received by: (Signature) Date/Time Relinquished b
Travis Casey Due Date:	02 Chain of Custody 02 Chain of Custody 02 Chain of Custody 03 Chain of Custody 04 Chain of Custody 05 Cha
CEIPT     Temp Blank:     Yes No     Wet Ice:     Yes No       3.4     3.2     Thermometer ID     Bigs No       (Yes No     1.4     0.0       3.4     3.4     3.4       3.4     3.4     3.4       3.4     3.2     Thermometer ID       3.4     3.4     3.4       3.4     3.4     3.4       3.4     3.4     3.4       3.4     3.4     3.4       3.4     3.4     3.4       3.4     3.4     3.4       3.4     3.4     3.4       3.4     3.4     3.4       3.4     3.4     3.4       3.4     3.4     3.4       3.4     3.4     3.4       3.4     3.4     3.4       3.5     3.4     3.4       3.6     3.4     3.4       3.7     3.4     3.4       3.8     3.4     3.4       3.9     3.4     3.4       3.9     3.4     3.4       3.9     3.4     3.4       3.9     3.4     3.4       3.9     3.4     3.4       3.9     3.4     3.4       3.9     3.4     3.4       3.9	Lu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Mn Mo Ni Se Ag TI U 1631 I are due to circumstances beyond the control enforced unless previously negotiated.
fication Matrix Correction Factor: >> Correc	Lu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Mn Mo Ni Se Ag TI U Inter due to circumstances beyond the control are due to circumstances beyond the control
9 6-11-21 0839 11 1 V V V	Lu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Mn Mo Ni Se Ag TI U Isre due to circumstances beyond the control enforced unless previously negotiated.
	S. It assigns slandard rerms and condutions are due to circumstances beyond the control enforced unless previously negotiated.
	Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Mn Mo Ni Se Ag TI U s. It assigns standard terms and condutions are due to circumstances beyond the control enforced unless previously negotiated.
Su Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Mn Mo Ni Se Ag TI U Su It assigns standard terms and conditions the due to circumstances beyond the control	

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Released to Imaging: 7/13/2021 2:49:23 PM

Job Number: 890-802-1

List Source: Eurofins Xenco, Carlsbad

# Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 802 List Number: 1 Creator: Ordonez, Gabby

<6mm (1/4").

Login Number: 802		List Sour	ce: Eurofins Xenco, Carlsbad	
List Number: 1 Creator: Ordonez, Gabby				5
	•	0		6
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			8
Samples were received on ice.	True			
Cooler Temperature is acceptable.	True			9
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			13
Sample containers have legible labels.	True			14
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			

The cooler's custody seal, if present, is intact.

The cooler or samples do not appear to have been compromised or

There are no discrepancies between the containers received and the COC.

Samples are received within Holding Time (excluding tests with immediate

There is sufficient vol. for all requested analyses, incl. any requested

Containers requiring zero headspace have no headspace or bubble is

Sample custody seals, if present, are intact.

#### Login Sample Receipt Checklist

Answer

True

True

True

True True

True

True

True

True

N/A

True

Comment

Client: WSP USA Inc.

Login Number: 802

Creator: Kramer, Jessica

Samples were received on ice.

Cooler Temperature is acceptable. Cooler Temperature is recorded.

COC is filled out in ink and legible.

Sample containers have legible labels.

Containers are not broken or leaking.

Sample bottles are completely filled.

Sample Preservation Verified.

Sample collection date/times are provided.

Appropriate sample containers are used.

COC is filled out with all pertinent information.

Is the Field Sampler's name present on COC?

List Number: 2

tampered with.

COC is present.

HTs)

MS/MSDs

<6mm (1/4").

Question

Job Number: 890-802-1

List Source: Eurofins Xenco, Midland	
List Creation: 06/12/21 04:19 PM	

District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3470 Fax: (505) 476-3462

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

CONDITIONS
------------

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	32275
	Action Type:
	[C-141] Release Corrective Action (C-141)
-	

#### CONDITIONS

Created By	Condition	Condition Date
chensley	None	7/13/2021

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Action 32275