

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nHMP 1411830637 OPERATOR Initial Report Final Report

Name of Company: BOPCO, L.P. <i>260737</i>	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: JRU-21 SWD-1	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-41074
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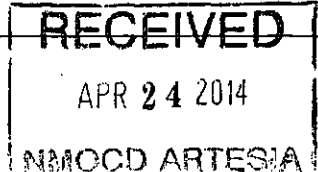
LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	21	22S	30E	1508	North	1926	East	Eddy

Latitude N 32.381464 Longitude W 103.883210

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 1200 bbls.	Volume Recovered: 1000 bbls.
Source of Release: Frac tank overflow	Date and Hour of Occurrence: 4/14/14 approximately 8:30 a.m.	Date and Hour of Discovery: 4/14/14 at 4:30 p.m. by BOPCO
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD emergency #104 and the BLM	
By Whom? Tony Savoie	Date and Hour: 4/14/14 at 8:30 p.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		



Describe Cause of Problem and Remedial Action Taken.*
The rig was filling the frac tanks on-site in preparation of running acid on the SWD well, the pumps were shut down however the valves were misaligned by the rig crew and the water continued to gravitate into the tanks from the Legg Federal SWD water source causing the frac tanks to overflow undetected.

Describe Area Affected and Cleanup Action Taken.*
The frac tanks were set inside a plastic lined containment. The frac containment overflowed into a secondary earthen containment that was breached allowing water to leave the pad area and travel down a dry drainage ditch then eventually spread out into the pasture area north of the drilling pad. The spill impacted approximately 7200 sq.ft. of pad area and approximately 2700 sq.ft. of pasture area. Approximately 800 bbls of produced water were recovered from the lined frac containment and approximately 200 bbls were recovered from the earthen backup containment. Remediation activities are scheduled to begin as soon as the BLM arch survey is cleared. The rig moved off location on 4/22/14. The spill area will be cleaned up in accordance to the NMOCD and BLM remediation guidelines.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: <i>Tony Savoie</i>	OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Waste Management and Remediation Specialist	Approval Date: <i>7/28/14</i>	Expiration Date: <i>NA</i>
E-mail Address: <i>tasavoie@basspet.com</i>	Conditions of Approval: Remediation per OCD Rule & Guidelines, & like approval by BLM. SUBMIT REMEDIATION	Attached <input type="checkbox"/>
Date: 4/24/14 Phone: 432-556-8730	PROPOSAL NO LATER THAN: <i>5/28/14</i>	

2RP-2267

Incident ID	nHMP1411836637
District RP	2RP-2267
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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


State of New Mexico
Oil Conservation Division

Page 4

Incident ID	nHMP1411836637
District RP	2RP-2267
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature:  Date: 07/29/2021

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Incident ID	nHMP1411836637
District RP	2RP-2267
Facility ID	
Application ID	

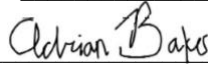
Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature:  Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

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Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nHMP14/6331258

OPERATOR

Initial Report Final Report

Name of Company: BOPCO, L.P. 260737	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: JRU Drilling Island #1 Well #135H	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-42376
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	21	22S	30E	1526	NORTH	1270	EAST	EDDY

Latitude N 32.381079 Longitude W 103.881948

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 15 bbls	Volume Recovered: 10 bbls
Source of Release: Off-load line to frac tank	Date and Hour of Occurrence: 6/4/14 approximately 2:00 p.m.	Date and Hour of Discovery: 6/4/14 approximately 2:00 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

NM OIL CONSERVATION
ARTESIA DISTRICT

JUN 09 2014

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If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Independence Rig #202 Was circulating the well during drilling operations. A vacuum truck on-site was pulling fluid from one of the return tanks, the vacuum hose was laid on the ground and the fluid from the tank syphoned out onto the ground.

Describe Area Affected and Cleanup Action Taken.*

The spill impacted approximately 200 sq.ft. of well pad area. The free standing fluid was recovered and the saturated soil was scraped up and stockpiled on site pending disposal. The final remediation will be done after the rig and equipment have been removed from the drill site. The remediation activities will comply with the NMOCD and BLM remediation guidelines.

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Signature: <i>Tony Savoie</i>	OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Waste Management and Remediation Specialist	Approval Date: 6/12/14	Expiration Date: NA
E-mail Address: tasavoie@basspet.com	Conditions of Approval: Remediation per OCD Rule & Guidelines, & like approval by BLM. SUBMIT REMEDIATION	
Date: 6/9/14 Phone: 432-556-8730	Attached <input type="checkbox"/>	

PROPOSAL NO LATER THAN:

7/12/14

2RP-2334

* Attach Additional Sheets If Necessary

Incident ID	nHMP1416331258
District RP	2RP-2334
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

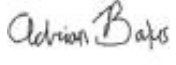
State of New Mexico
Oil Conservation Division

Page 4

Incident ID	nHMP1416331258
District RP	2RP-2334
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature:  Date: 7/29/2021

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Incident ID	nHMP1416331258
District RP	2RP-2334
Facility ID	
Application ID	

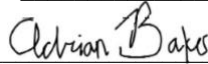
Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature:  Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

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

AUG 13 2014

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED

Release Notification and Corrective Action

nAB1422639350 OPERATOR [X] Initial Report [] Final Report
Name of Company: BOPCO, L.P. 2100731 Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220 Telephone No. 575-887-7329
Facility Name: JRU-DI-1-JRU-21 SWD Facility Type: Exploration and Production
Surface Owner: Federal Mineral Owner: Federal API No. 30-015-41074

LOCATION OF RELEASE

Table with 9 columns: Unit Letter, Section, Township, Range, Feet from the, North/South Line, Feet from the, East/West Line, County. Values: G, 21, 22S, 30E, 1508, North, 1926, East, Eddy

Latitude N 32.380643 Longitude W 103.884473

NATURE OF RELEASE

Type of Release: Produced water Volume of Release: 600 bbls. Volume Recovered: 500 bbls.
Source of Release: SWD Pump Date and Hour of Occurrence: 8/8/14 Time unknown Date and Hour of Discovery: 8/8/14 at approximately 12:00 p.m.
Was Immediate Notice Given? [X] Yes [] No [] Not Required If YES, To Whom? Mike Bratcher and Jim Amos (BLM)
By Whom? Tony Savoie Date and Hour: 8/8/14 at 1:26 p.m.
Was a Watercourse Reached? [] Yes [X] No If YES, Volume Impacting the Watercourse.

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
An 8"x6" reducer failed on the suction side of the SWD horizontal pumps. The pumps shut down on low suction and the valves to the pump were manually closed. The fitting was replaced.

Describe Area Affected and Cleanup Action Taken.*
The SWD pumps were enclosed in 0 perm containment with a holding capacity of approximately 500 bbls. The fluid ran over the containment walls and impacted approximately 900 sq.ft. of caliche pad. The spill traveled off the pad via a narrow gully for approximately 750 ft. spread out and impacted approximately 6,400 sq.ft. of pasture area. All of the fluid on the pad and pasture area soaked into the ground. BOPCO is in the process of setting up an Arch survey to gain access to the area to be remediated. The spill area will be cleaned up in accordance to the NMOCD and BLM remediation guidelines.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Tony Savoie
Printed Name: Tony Savoie
Title: Waste Management and Remediation Specialist
E-mail Address: tasavoie@basspet.com
Date: 8/13/14 Phone: 432-556-8730
OIL CONSERVATION DIVISION
Signed By: Mike Bratcher
Approved by Environmental Specialist:
Approval Date: 8/14/14 Expiration Date: N/A
Conditions of Approval: Remediation per OCD Rule & Guidelines. SUBMIT REMEDIATION PROPOSAL NO LATER THAN:
Attached []

* Attach Additional Sheets If Necessary

282-2440

Incident ID	NAB1422639350
District RP	2RP-2440
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>>100</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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- Field data
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- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
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State of New Mexico
Oil Conservation Division

Incident ID	NAB1422639350
District RP	2RP-2440
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature:  Date: 07/29/2021

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Incident ID	NAB1422639350
District RP	2RP-2440
Facility ID	
Application ID	

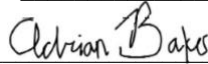
Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature:  Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ 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
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NM OIL CONSERVATION

ARTESIA DISTRICT

Form C-141

Revised August 8, 2011

FEB 2 2015

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED

Release Notification and Corrective Action

NAB1503439598

Name of Company: BOPCO, L.P. <i>200737</i>		OPERATOR	<input checked="" type="checkbox"/> Initial Report	<input type="checkbox"/> Final Report
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220		Contact: Tony Savoie		
Facility Name: JRU-DI-1-JRU-21 SWD Pump		Telephone No. 575-887-7329		
Surface Owner: Federal		Mineral Owner: Federal	API No. 30-015-41074	
Facility Type: Exploration and Production				

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	21	22S	30E	1508	North	1926	East	Eddy

Latitude N 32.380643 Longitude W 103.884473

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 120 bbls.	Volume Recovered: 112 bbls.
Source of Release: SWD Pump	Date and Hour of Occurrence: 1/31/15 at approx. 3:00 p.m.	Date and Hour of Discovery: 1/31/15 at approx. 3:00 p.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher, Heather Patterson, and Jim Amos (BLM)	
By Whom? Tony Savoie	Date and Hour: 1/31/15 at 6:01 p.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A fiberglass connection failed on the suction line to the SWD H-pumps, the pumps were shut down and valves were closed to isolate the damaged area. Crews started re-building the suction line header the day of the spill.

Describe Area Affected and Cleanup Action Taken.*
The spill was mostly contained in the 0-perm containment around the SWD pumps. A vacuum truck recovered 110 bbls from the containment and approximately 2 bbls off the ground. The pad area that was impacted by the release was the same area as impacted by a previous spill, reference 2RP-2440. The area had been recently sampled and reviewed by the BLM. Remediation activities were scheduled to begin when the drilling equipment was moved off the location.
The spill area will be cleaned up in accordance to the NMOCD and BLM remediation guidelines.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: <i>Tony Savoie</i>	OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Waste Management and Remediation Specialist	Approval Date: <i>2/3/15</i>	Expiration Date: <i>N/A</i>
E-mail Address: <i>tasavoie@basspet.com</i>	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines	
Date: <i>2/2/15</i>	Phone: 432-556-8730	Attached <input type="checkbox"/>

* Attach Additional Sheets If Necessary

LATER THAN: 3/3/15 *2RP-2782*

Incident ID	NAB1503439598
District RP	2RP-2782
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	NAB1503439598
District RP	2RP-2782
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature:  Date: 07/29/2021

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Incident ID	NAB1503439598
District RP	2RP-2782
Facility ID	
Application ID	

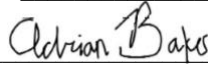
Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature:  Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

NM OIL CONSERVATION

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

ARTESIA DISTRICT

JUN 12 2015

RECEIVED

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

NAB1516652299

OPERATOR

Initial Report Final Report

Name of Company: BOPCO, L.P. <i>AWDT37</i>	Contact: Amy Ruth
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: James Ranch Unit #012H	Facility Type: Production Well

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-22162
------------------------	------------------------	----------------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	21	22S	30E	1450	North	1830	East	Eddy

Latitude 32.380677° Longitude -103.884454°

NATURE OF RELEASE

Type of Release: Brine Water	Volume of Release: 818 bbls	Volume Recovered: 740 bbls
Source of Release: Jet pump on triplex unit	Date and Hour of Occurrence: 6/8/2015 Time unknown	Date and Hour of Discovery: 6/8/2015 approx. 7 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Heather Patterson (NMOCD) and Jim Amos (BLM)	
By Whom? Tony Savoie	Date and Hour: 9:34 am and 9:37 am respectively <i>10/18/15 @ 9:31am</i>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. <i>(according to notification)</i> N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
Vibration caused a bolt to shear off of the filter pot lid on the jet pump. Unit was LOTO until repairs can be made. Standing fluids were recovered from the ground and pump containments.

Describe Area Affected and Cleanup Action Taken.*
The leak affected 43,350 square feet of well pad and 880 square feet of pasture on the north side of the pad. The impacted area will be delineated and addressed.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: <i>[Signature]</i>	OIL CONSERVATION DIVISION	
Printed Name: Amy Ruth	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Assistant Remediation Foreman	Approval Date: <i>6/16/15</i>	Expiration Date: <i>N/A</i>
E-mail Address: ACRuth@basspet.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 6/10/2015	Phone: 432-661-0571	Remediation per O.C.D. Rules & Guidelines

* Attach Additional Sheets If Necessary

SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 7/17/15 *2RP-3046*

Incident ID	NAB1516652299
District RP	2RP-3046
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

State of New Mexico
Oil Conservation Division

Incident ID	NAB1516652299
District RP	2RP-3046
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature:  Date: 07/29/2021

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Incident ID	NAB1516652299
District RP	2RP-3046
Facility ID	
Application ID	

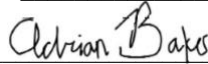
Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature:  Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

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

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

NAB1520256930

OPERATOR

Initial Report Final Report

Name of Company: BOPCO, L.P. NPD 737	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: JRU-12H on the JRU-DI-Well pad	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-22162
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	21	22S	30E	1450	North	1830	East	Eddy

Latitude N 32.380666° Longitude W 103.884459°

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 77 bbls.	Volume Recovered: 50 bbls
Source of Release: Suction strainer to Jet Pump	Date and Hour of Occurrence: 7/18/15, time unknown	Date and Hour of Discovery: 7/18/15 at approximately 8:30 p.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher, Heather Patterson and Jim Amos	
By Whom? Tony Savoie	Date and Hour: 7/19/15 at 5:15 a.m. (via e-mail)	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

NM OIL CONSERVATION
ARTESIA DISTRICT
JUL 21 2015
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If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A bolt on the jet pump suction strainer sheared off, releasing water on the well pad and containment. The transfer pump to the jet pump shut down on low discharge which automatically shut down the jet pump.

Describe Area Affected and Cleanup Action Taken.*
The release was partly contained in the 0 perm containment around the pump, the remainder of the fluid impacted approximately 1500 sq.ft. of caliche well pad. This area has had previous reportable spills. It was estimated that 40 bbls of PW was recovered from the containment and 10 bbls picked up from the pad. The spill area will be cleaned up in accordance to the NMOCD and BLM remediation guidelines.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie	Approved by Environmental Specialist:	
Title: Waste Management and Remediation Specialist	Approval Date: 7/21/15	Expiration Date: N/A
E-mail Address: tasavoic@basspct.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines Attached <input type="checkbox"/> SUBMIT REMEDIATION PROPOSAL NO	
Date: 7/21/15 Phone: 432-556-8730	LATER THAN: 7/22/15	

* Attach Additional Sheets If Necessary

2RP-3143

Incident ID	NAB1520256930
District RP	2RP-3143
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	NAB1520256930
District RP	2RP-3143
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature:  Date: 07/29/2021

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Incident ID	NAB1520256930
District RP	2RP-3143
Facility ID	
Application ID	

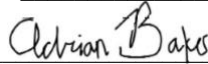
Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature:  Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ 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
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NM OIL CONSERVATION
ARTESIA DISTRICT

JAN 28 2016 Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED

Release Notification and Corrective Action

NAB1602952102

OPERATOR

Initial Report Final Report

Name of Company: BOPCO, L.P. <u>260737</u>	Contact: Amy Ruth
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: JRU #012H	Facility Type: Exploration and Production
Surface Owner: Federal	Mineral Owner: Federal
API No. 30-015-22162	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	21	22S	30E	1450	North	1830	East	Eddy

Latitude 32.380851° Longitude -103.883785°

NATURE OF RELEASE


Type of Release	Produced Water	Volume of Release	Volume Recovered
Source of Release	Discharge flow line	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Amy Ruth	Date and Hour	
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
The discharge line from the triplex pump to the well head developed a leak below ground surface. Line was isolated, then excavated and repaired.

Describe Area Affected and Cleanup Action Taken.*
The leak affected 7,135 ft² of well pad. Standing fluids were recovered.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Amy C. Ruth	Approved by Environmental Specialist: <u>Mike Bratcher</u>	
Title: EHS Remediation Specialist	Approval Date: <u>1/29/16</u>	Expiration Date: <u>N/A</u>
E-mail Address: ACRuth@basspet.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines Attached <input type="checkbox"/>	
Date: 1/27/2016 Phone: 432-661-0571	SUBMIT REMEDIATION PROPOSAL NO LATER THAN: <u>3/1/16</u>	

* Attach Additional Sheets If Necessary

2RP-3524

Incident ID	NAB1602952102
District RP	2RP-3524
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

State of New Mexico
Oil Conservation Division

Incident ID	NAB1602952102
District RP	2RP-3524
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature:  Date: 07/29/2021

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Incident ID	NAB1602952102
District RP	2RP-3524
Facility ID	
Application ID	

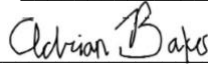
Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature:  Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ 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
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

NAB1611933379 OPERATOR Initial Report Final Report

Name of Company: BOPCO, L.P. 210737	Contact: Amy Ruth
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: James Ranch Unit #12H	Facility Type: Exploration and Production
Surface Owner: Federal	Mineral Owner: Federal
API No. 30-015-22162	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	21	22S	30E	1450	North	1830	East	Eddy

Latitude 32.380700° Longitude -103.884298°

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	24 bbls	Volume Recovered	10 bbls
Source of Release	Line Failure from Jet Pump to Well	Date and Hour of Occurrence	4/21/2016 time unknown	Date and Hour of Discovery	4/21/2016 2:20 pm
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	N/A		
By Whom?	N/A	Date and Hour	N/A		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No.	If YES, Volume Impacting the Watercourse.	N/A		

NM OIL CONSERVATION
ARTESIA DISTRICT

APR 27 2016

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If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*

Collar on pressurized steel line corroded and fluids escaped to ground surface. Line was isolated and exposed. Line will be replaced.

Describe Area Affected and Cleanup Action Taken.*

The leak affected 900 square feet of well pad. Standing fluids were recovered.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

OIL CONSERVATION DIVISION

Signature: 


Printed Name: Amy C. Ruth

Title: EHS Remediation Specialist

E-mail Address: ACRuth@basspet.com

Date: 4/27/2016

Phone: 432-661-0571

Approved by Environmental Specialist: 

Approval Date: 4/28/16

Expiration Date: N/A

Conditions of Approval:
Remediation per O.C.D. Rules & Guidelines Attached
SUBMIT REMEDIATION PROPOSAL NO

LATER THAN: 5/28/16

2RD-3062

* Attach Additional Sheets If Necessary

Incident ID	NAB1611933379
District RP	2RP-3662
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Incident ID	NAB1611933379
District RP	2RP-3662
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature:  Date: 07/29/2021

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Incident ID	NAB1611933379
District RP	2RP-3662
Facility ID	
Application ID	

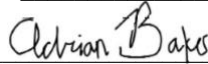
Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature:  Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

NM OIL CONSERVATION
ARTESIA DISTRICT

State of New Mexico
Energy Minerals and Natural Resources

SEP 06 2016

Form C-141
Revised August 8, 2011

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

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

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.
RECEIVED

Release Notification and Corrective Action

NAB11425130938

OPERATOR

Initial Report Final Report

Name of Company: BOPCO, L.P. <i>2100737</i>	Contact: Amy Ruth
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: JRU #012H	Facility Type: Exploration and Production
Surface Owner: Federal	Mineral Owner: Federal
API No. 30-015-22162	

LOCATION OF RELEASE

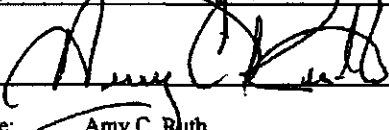

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	21	22S	30E	1600	North	2100	East	Eddy

Latitude 32.380535° Longitude -103.884395°

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	65 bbl	Volume Recovered	50 bbl
Source of Release	Jet Pump Suction Line	Date and Hour of Occurrence	8/26/2016 time unknown	Date and Hour of Discovery	8/26/2016 6:20 pm
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mike Bratcher/Heather Patterson (NMOCD), Shelly Tucker (BLM)		
By Whom?	Amy Ruth	Date and Hour	8/26/2016 at 7:15 pm by email		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	N/A		
If a Watercourse was Impacted, Describe Fully.* N/A					
Describe Cause of Problem and Remedial Action Taken.* The 4" poly suction line for the jet pump ruptured. The lease operator shut down the charge pump and isolated the valves. The section of line was repaired.					
Describe Area Affected and Cleanup Action Taken.* The leak affected approximately 7,000 square feet of caliche pad and was prevented from entering the pasture due to the berms surrounding the drill island. Vacuum trucks recovered standing fluid.					

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Amy C. Ruth	Signed By  Approved by Environmental Specialist:	
Title: EHS Remediation Specialist	Approval Date: <i>9/6/16</i>	Expiration Date: <i>N/A</i>
E-mail Address: ACRuth@basspet.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines Attached <input type="checkbox"/>	
Date: 9/1/2016 Phone: 432-661-0571	SUBMIT REMEDIATION PROPOSAL NO LATER THAN: <i>10/8/16</i>	

* Attach Additional Sheets If Necessary

2RD-3864

Incident ID	NAB1625130938
District RP	2RP-3864
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

Incident ID	NAB1625130938
District RP	2RP-3864
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature:  Date: 07/29/2021

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Incident ID	NAB1625130938
District RP	2RP-3864
Facility ID	
Application ID	

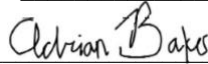
Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature:  Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

NM OIL CONSERVATION

ARTESIA DISTRICT

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

DEC 18 2017

Form C-141
Revised April 3, 2017

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

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.
RECEIVED

Release Notification and Corrective Action

NAB173004420 OPERATOR Initial Report Final Report

Name of Company XTO Energy <i>Booco 210737</i>	Contact Kyle Littrell
Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 432-221-7331
Facility Name: James Ranch Unit DI-1 #012H	Facility Type Exploration and Production
Surface Owner Federal	Mineral Owner Federal
API No. 30-015-22162	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	21	22S	30E	1550	north	2110	east	Eddy

Latitude 32.380659° Longitude -103.884436° NAD83

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 18 BPW	Volume Recovered 17 BPW
Source of Release Triplex jet pump	Date and Hour of Occurrence 12/6/2017 time unknown	Date and Hour of Discovery 12/6/2017 7 am
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		
Describe Cause of Problem and Remedial Action Taken.* A 2"x3" swedge on the triplex jet pump failed. The well was shut in until repairs can be made.		
Describe Area Affected and Cleanup Action Taken.* The release affected the impermeable lined containment and approximately 1 bbl of PW misted outside containment and impacted roughly 1250 square feet of caliche pad. All free-standing liquids were recovered from the containment and the containment and equipment were power washed. XTO mapped the extent of the release visually then excavated impacted material from pad surface. Impacted gravel was taken to Lea Land for disposal. Soil samples were collected to confirm compliance with NMOCD site specific standards. A XTO Maintenance Supervisor who is competent in the operation, maintenance, and inspection of all on-site equipment and facilities visually inspected the containment and verified there was no visual evidence of a liner breach. XTO will provide a closure report documenting soil removal and disposal, confirmation soil sampling results, and any other site remediation activities to the NMOCD upon receipt of laboratory analytical results.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.		

Signature: <i>[Signature]</i>	OIL CONSERVATION DIVISION	
Printed Name: Kyle Littrell	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Environmental Coordinator	Approval Date: 12/20/17	Expiration Date: N/A
E-mail Address: Kyle.Littrell@xtoenergy.com	Conditions of Approval: <i>see attached</i>	Attached <input checked="" type="checkbox"/> <i>AR 4528</i>
Date: 12/15/2017 Phone: 432-221-7331		

* Attach Additional Sheets If Necessary

12/21/17AB

Incident ID	NAB1736044200
District RP	2RP-4528
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	NAB1736044200
District RP	2RP-4528
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature:  Date: 07/29/2021

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Incident ID	NAB1736044200
District RP	2RP-4528
Facility ID	
Application ID	

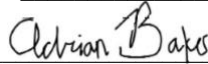
Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature:  Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

NM OIL CONSERVATION
ARTESIA DISTRICT

State of New Mexico
Energy Minerals and Natural Resources

FEB 15 2018

Form C-141
Revised April 3, 2017

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

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

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.
RECEIVED

Release Notification and Corrective Action

NAB1805030031

OPERATOR Initial Report Final Report

Name of Company: <i>XTO Energy</i>	Contact: Kyle Littrell
Address: 522 W. Mermod, Suite 404 Carlsbad, N.M. 88220	Telephone No: 432-221-7331
Facility Name: JRU DI I #127 (@ JRU DI 1A)	Facility Type: Exploration and Production
Surface Owner: Federal	Mineral Owner: Federal
API No: 30-015-43231	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	21	22S	30E	1290	North	2590	East	Eddy

Latitude 32.38141 Longitude -103.88592 NAD83

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	115 bbls	Volume Recovered	25
Source of Release	Victaulic clamp connection on contractor trailer	Date and Hour of Occurrence	2/3/2018 time unknown	Date and Hour of Discovery	2/3/2018 2:15 pm
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mike Bratcher/Crystal Weaver (NMOCD), Shelly Tucker/Jim Amos (BLM)		
By Whom?	Amy Ruth	Date and Hour:	2/3/2018 7:13 pm		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	N/A		
If a Watercourse was Impacted, Describe Fully.* N/A					
Describe Cause of Problem and Remedial Action Taken.* A 10" Victaulic clamp became disconnected from a contractor trailer. Pumps were shut down and the clamp was properly reconnected. Fluids escaped the duck ponds to the ground. The trailer and associated tanks were placed within high-walled plastic lined containment until completion of the operation.					
Describe Area Affected and Cleanup Action Taken.* The leak affected 21,000 square feet of caliche pad and extended approximately 350 feet North/Northeast into the pasture. Free standing fluids were recovered. An environmental contractor was retained to assist with the remediation and soil samples have been collected.					

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature:		OIL CONSERVATION DIVISION	
Printed Name: Kyle Littrell		Approved by Environmental Specialist:	
Title: Environmental Coordinator		Approval Date: 2/16/18	Expiration Date: N/A
E-mail Address: Kyle.Littrell@xtoenergy.com		Conditions of Approval: <i>See Attached</i>	
Date: 2/15/2018 Phone: 432-221-7331		Attached <input type="checkbox"/> <i>2RP-4625</i>	

* Attach Additional Sheets If Necessary

Incident ID	NAB1805036031
District RP	2RP-4625
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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State of New Mexico
Oil Conservation Division

Incident ID	NAB1805036031
District RP	2RP-4625
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature:  Date: 07/29/2021

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Incident ID	NAB1805036031
District RP	2RP-4625
Facility ID	
Application ID	

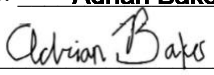
Closure

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature:  Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ 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
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

MAY 17 2018

DISTRICT II-ARTESIA O.C.D.

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

NAB1814128830

OPERATOR Initial Report Final Report

Name of Company: XTO Energy <i>BDPOD 240737</i>	Contact: Amy C. Ruth
Address: 3104 E. Greene St., Carlsbad, N.M. 88220	Telephone No: 575-689-3380
Facility Name: James Ranch Unit DII #157H	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No: 30-015-42607
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	21	22S	30E	1590	North	1885	East	Eddy

Latitude 32.380562° Longitude -103.88368° NAD83

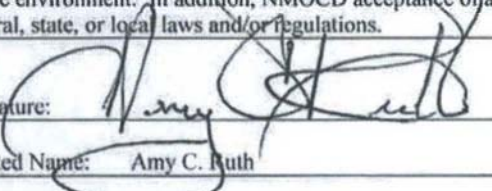
NATURE OF RELEASE

Type of Release	Crude Oil	Volume of Release	13 bbls	Volume Recovered	10 bbls
Source of Release	Temporary oil tank	Date and Hour of Occurrence	5/4/2018 8 am	Date and Hour of Discovery	5/4/2018 8 am
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	N/A		
By Whom?	N/A	Date and Hour:	N/A		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	N/A		
If a Watercourse was Impacted, Describe Fully.*	N/A				

Describe Cause of Problem and Remedial Action Taken.*
Due to a faulty head switch, a temporary oil tank at the flow back site overflowed. The head switch was repaired and the tank was returned to operation.

Describe Area Affected and Cleanup Action Taken.*
The release affected the southwest edge of the well pad. Free standing fluids were recovered. An environmental contractor will be retained to assist with delineation and remediation efforts.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Amy C. Ruth	Approved by Environmental Specialist: <i>Mike Sanchez</i>	
Title: Environmental Coordinator	Approval Date: <i>5/17/18</i>	Expiration Date: <i>N/A</i>
E-mail Address: Amy.Ruth@xtoenergy.com	Conditions of Approval: <i>See attached</i>	Attached: <input checked="" type="checkbox"/> <i>2RD 4756</i>
Date: 5/17/2018 Phone: 575-689-3380		

* Attach Additional Sheets If Necessary

Incident ID	NAB1814128830
District RP	2RP-4756
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

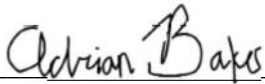
- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

Incident ID	NAB1814128830
District RP	2RP-4756
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature:  Date: 07/29/2021

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Incident ID	NAB1814128830
District RP	2RP-4756
Facility ID	
Application ID	

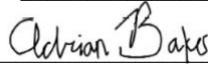
Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature:  Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ 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

Incident ID	NRM1935433078
District RP	
Facility ID	
Application ID	

Release Notification

HIE9U-191101-C-1410

Responsible Party

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

Location of Release Source

Latitude 32.380435 Longitude -103.884174
 (NAD 83 in decimal degrees to 5 decimal places)

Site Name	JRU DI 1 # 163	Site Type	Well Location
Date Release Discovered	10/18/2019	API# (if applicable)	30-015-41694 (JRU DI 1 # 163)

Unit Letter	Section	Township	Range	County
G	21	22S	30E	EDDY

Surface Owner: State Federal Tribal Private (Name: _____)

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 0.41	Volume Recovered (bbls) 0.10
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 7.72	Volume Recovered (bbls) 1.90
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: The lease operator found a leak from a buried 3" steel flow line due to external corrosion. The well was shut-in until repairs were made on the flow line and the release remained on pad. Additional third party resources have been retained to assist in the remediation.

Form C-141

State of New Mexico
Oil Conservation Division


Page 2

Incident ID	NRM1935433078
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice 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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: N/A	
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: <u>Kyle Littrell</u>	Title: <u>SH&E Supervisor</u>
Signature: 	Date: <u>11/1/2019</u>
email: <u>Kyle.Littrell@xtoenergy.com</u>	Telephone: _____
OCD Only	
Received by: <u>Ramona Marcus</u>	Date: <u>12/20/2019</u>

Incident ID	NRM1935433078
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

Incident ID	NRM1935433078
District RP	
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature:  Date: 07/29/2021

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Incident ID	NRM1935433078
District RP	
Facility ID	
Application ID	

Remediation Plan

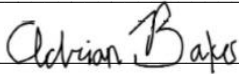
Remediation Plan Checklist: Each of the following items must be included in the plan.

- Detailed description of proposed remediation technique
- Scaled sitemap with GPS coordinates showing delineation points
- Estimated volume of material to be remediated
- Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: Each of the following items must be confirmed as part of any request for deferral of remediation.

- Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- Extents of contamination must be fully delineated.
- Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature:  Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

- Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature: _____ Date: _____

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
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1000 Rio Brazos Road, Aztec, NM 87410
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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

<u>Incident ID</u>	NRM2002747253
<u>District RP</u>	
<u>Facility ID</u>	
<u>Application ID</u>	

Release Notification

P5X0A-191211-C-1410

Responsible Party

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

Location of Release Source

Latitude 32.380679 Longitude -103.884438
(NAD 83 in decimal degrees to 5 decimal places)

Site Name JRU 21 SWD #1	Site Type SWD Location
Date Release Discovered 11/27/2019	API# (if applicable) 30-015-41074 (James Ranch Unit 21 SWD #1)

Unit Letter	Section	Township	Range	County
G	21	22S	30E	EDDY

Surface Owner: State Federal Tribal Private (Name: _____)

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls) 0.0	Volume Recovered (bbls) 0.0
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 579.92	Volume Recovered (bbls) 500.00
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Release was caused by the expansion joint/vibration damper on suction side of H-pump failing. Spill consisted of 480 bbls produced water into lined containment, all recovered. Another 79.92 bbls of produced water overflowed the containment and approximately 20 bbls was recovered from it. Additional third party resources have been retained to assist in the remediation.

Form C-141

State of New Mexico
Oil Conservation Division


Page 2

Incident ID	NRM2002747253
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? YES – An unauthorized release of fluid over 25 barrels.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? YES, by Amy Ruth : Mike Bratcher; Rob Hamlet; Victoria Venegas; "Griswold, Jim, EMNRD"; blm_nm_cfo_spill@blm.gov; Crisha Morgan by email on November 27, 2019 at 8:15 AM.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why: _____ _____ _____
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: <u>Adrian Baker</u> Title: <u>SH&E Coordinator</u> Signature: <u></u> Date: <u>12/11/2019</u> email: <u>Adrian_Baker@xtoenergy.com</u> Telephone: <u>4322363808</u>
<u>OCD Only</u> Received by: <u>Ramona Marcus</u> Date: <u>01/27/2020</u>

Incident ID	NRM2002747253
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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


- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
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- 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.

Incident ID	NRM2002747253
District RP	
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature:  Date: 07/29/2021

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Incident ID	NRM2002747253
District RP	
Facility ID	
Application ID	

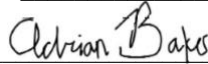
Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature:  Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

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

Form C-141
 Revised August 24, 2018
 Submit to appropriate OCD District office

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

Incident ID	NRM2006432204
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.380774 Longitude -103.881894
(NAD 83 in decimal degrees to 5 decimal places)

Site Name JRU DI 1 #211H	Site Type Well Pad
Date Release Discovered 02/18/2020	API# (if applicable) NA

Unit Letter	Section	Township	Range	County
H	21	22S	30E	Eddy

Surface Owner: State Federal Tribal Private (Name: _____)

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 5	Volume Recovered (bbls) 4.95
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

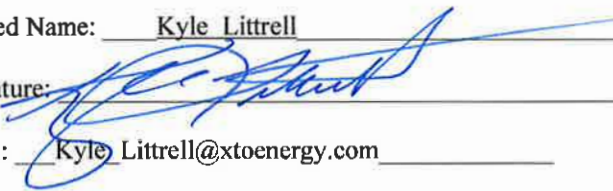
Cause of Release: Sand cut caused a release of fluid from a low torque valve. Total volume released was 5 barrels of produced water. 2.5 barrels remained in containment and 2.5 barrels was released to the pad surface. Vacuum truck recovered 4.95 barrels. A third party contractor has been notified to complete remediation activities.

Incident ID	NRM20064
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why: N/A
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: <u>Kyle Littrell</u> Title: <u>SH&E Supervisor</u> Signature:  Date: <u>3/3/2020</u> email: <u>Kyle.Littrell@xtoenergy.com</u> Telephone: _____
OCD Only Received by: <u>Ramona Marcus</u> Date: <u>3/4/2020</u>

NRM2006432204

Location:	JRU DI 1 211H	
Spill Date:	2/18/2020	
Area 1		
Approximate Area =	27.80	cu. ft.
VOLUME RECOVERED		
Total Produced Water =	4.95	bbls
Area 2		
Approximate Area =	450.00	sq. ft.
Average Saturation (or depth) of spill =	0.25	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Produced Water =	0.05	bbls
TOTAL VOLUME OF LEAK		
Total Produced Water =	5.00	bbls
TOTAL VOLUME RECOVERED		
Total Produced Water =	4.95	bbls

Incident ID	NRM2006432204
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Incident ID	NRM2006432204
District RP	
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator
Signature: *Adrian Baker* Date: 07/29/2021
email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Page 6

Incident ID	NRM2006432204
District RP	
Facility ID	
Application ID	

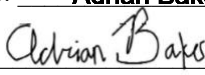
Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature:  Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ 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

Incident ID	NRM2011445697
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.381266 Longitude -103.884166
(NAD 83 in decimal degrees to 5 decimal places)

Site Name JRU DI1 BS2A 7E 211H	Site Type Well Pad
Date Release Discovered 4/7/2020	API# (if applicable)

Unit Letter	Section	Township	Range	County
G	21	22S	30E	Eddy

Surface Owner: State Federal Tribal Private (Name: _____)

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 10	Volume Recovered (bbls) 9.8
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release Sand cut a hole in a fitting on the circulation pump releasing 10 barrels of water to the lined containment. The containment had a hole which released 0.2bbl to the pad surface. A vacuum truck was dispatched and recovered 9.8 barrels from the containment. A third party contractor will be retained for remediation activities.

State of New Mexico
Oil Conservation Division

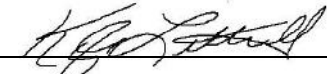
Page 2

Incident ID	NRM2011445697
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice 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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: N/A	
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.	
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Printed Name: <u>Kyle Littrell</u>	Title: <u>SH&E Supervisor</u>
Signature: <u></u>	Date: <u>4-21-20</u>
email: <u>Kyle_Littrell@xtoenergy.com</u>	Telephone: <u>432-221-7331</u>
<u>OCD Only</u>	
Received by: <u>Ramona Marcus</u>	Date: <u>4/23/2020</u>

NRM2011445697

Location:	JRU DI1 BS2A 7E 211H	
Spill Date:	4/7/2020	
Area 1		
Approximate Area =	227.00	sq. ft.
Average Saturation (or depth) of spill =	2.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Produced Water =	0.20	bbls
Area 2		
Approximate Area =	54.90	cu. ft.
VOLUME RECOVERED		
Total Produced Water =	9.80	bbls
TOTAL VOLUME OF LEAK		
Total Produced Water =	10.00	bbls
TOTAL VOLUME RECOVERED		
Total Produced Water =	9.80	bbls

Incident ID	NRM2011445697
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	NRM2011445697
District RP	
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature: *Adrian Baker* Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only
 Received by: _____ Date: _____

Incident ID	NRM2011445697
District RP	
Facility ID	
Application ID	

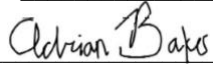
Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature:  Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ 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

Incident ID	NRM2011535196
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.38126 Longitude -103.88416
(NAD 83 in decimal degrees to 5 decimal places)

Site Name JRU DI1 BS2A 7W 212H	Site Type Well Pad
Date Release Discovered 04/09/2020	API# (if applicable)

Unit Letter	Section	Township	Range	County
G	21	22S	30E	Eddy

Surface Owner: State Federal Tribal Private (Name: _____)

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 10	Volume Recovered (bbls) 9.7
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release A fitting on the circulation pump experienced a sand cut, releasing 10 barrels of fluid. 8 barrels of produced water were captured within the lined containment. A hole in containment allowed 2 barrels to impact pad. Vacuum truck was dispatched and recovered all 8 barrels from the lined containment, and 1.7 barrels from the pad surface. A third party contractor will be retained for remediation activities.


State of New Mexico
Oil Conservation Division

Incident ID	NRM2011535196
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice 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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: N/A	
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: <u>Kyle Littrell</u>	Title: <u>SH&E Supervisor</u>
Signature: <u></u>	Date: <u>4-23-20</u>
email: <u>Kyle_Littrell@xtoenergy.com</u>	Telephone: <u>432-221-7331</u>
<u>OCD Only</u>	
Received by: <u>Ramona Marcus</u>	Date: <u>4/24/2020</u>

NRM2011535196

Location:	JRU DI 1 BS2A 7W 212H	
Spill Date:	4/9/2020	
Area 1		
Approximate Area =	342.00	sq. ft.
Average Saturation (or depth) of spill =	2.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Produced Water =	2.00	bbls
Area 2		
Approximate Area =	44.78	cu. Ft.
VOLUME RECOVERED IN CONTAINMENT		
Total Produced Water =	8.00	bbls
TOTAL VOLUME OF LEAK		
Total Produced Water =	10.00	bbls
TOTAL VOLUME RECOVERED		
Total Produced Water =	9.70	bbls

Incident ID	NRM2011535196
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Incident ID	NRM2011535196
District RP	
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator
Signature: *Adrian Baker* Date: 07/29/2021
email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Incident ID	NRM2011535196
District RP	
Facility ID	
Application ID	

Closure

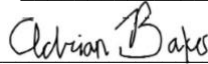
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Adrian Baker Title: Environmental Coordinator

Signature:  Date: _____

email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ 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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

Location of Release Source

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

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

Surface Owner: State Federal Tribal Private (Name: _____)

Nature and Volume of Release

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

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

Cause of Release

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
--	--

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

Initial Response

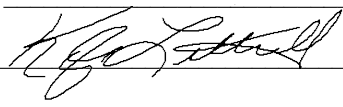
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

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

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

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

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

Printed Name: _____ Title: _____
 Signature:  _____ Date: _____
 email: _____ Telephone: _____

OCD Only
 Received by: _____ Date: _____

Location:	JRU DI1 BS1 3E 213H	
Spill Date:	4/10/2020	
Area 1		
Approximate Area =	2242.00	sq. ft.
Average Saturation (or depth) of spill =	2.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Produced Water =	6.00	bbls
TOTAL VOLUME OF LEAK		
Total Produced Water =	6.00	bbls
TOTAL VOLUME RECOVERED		
Total Produced Water =	4.00	bbls

Incident ID	NRM2011559899
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Incident ID	NRM2011559899
District RP	
Facility ID	
Application ID	

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

Printed Name: Adrian Baker Title: Environmental Coordinator
Signature: *Adrian Baker* Date: 07/29/2021
email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Incident ID	NRM2011559899
District RP	
Facility ID	
Application ID	

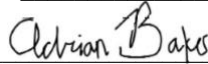
Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature:  Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Incident ID	NAB1736044200
District RP	2RP-4528
Facility ID	
Application ID	

Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Adrian Baker Title: Environmental Coordinator
 Signature: *Adrian Baker* Date: 07/29/2021
 email: adrian.baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: Robert Hamlet Date: 10/28/2021

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: *Robert Hamlet* Date: 10/28/2021
 Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

ATTACHMENT 3: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG

XTO ENERGY, INC.	James Ranch Unit Drilling Island 1 Eddy County, New Mexico	TE012919259
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Photo No.	Date	
1	April 7, 2021	
Southwest lined excavation delineation.		

Photo No.	Date	
2	February 15-17, 2020	
Northeast lined excavation delineation.		



PHOTOGRAPHIC LOG

XTO ENERGY, INC.	James Ranch Unit Drilling Island 1 Eddy County, New Mexico	TE012919259
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Photo No.	Date	
3	April 12, 2021	
Northwestern view of the eastern excavation		

Photo No.	Date	
4	April 19, 2021	
Western view of the northeast excavation prior to liner installation		



PHOTOGRAPHIC LOG		
XTO ENERGY, INC.	James Ranch Unit Drilling Island 1 Eddy County, New Mexico	TE012919259


Photo No.	Date	
5	April 28, 2020	
Western view of the southwest excavation prior to liner installation		

Photo No.	Date	
6	May 7, 2021	
Liner placement in Northeast excavation.		



PHOTOGRAPHIC LOG		
XTO ENERGY, INC.	James Ranch Unit Drilling Island 1 Eddy County, New Mexico	TE012919259

Photo No.	Date	
7	May 6, 2021	
View of southwest excavation liner placement.		

Photo No.	Date	
8	May 7, 2021	
Mechanical excavation extent along a pipeline ROW (NRM2002747253)		



PHOTOGRAPHIC LOG		
XTO ENERGY, INC.	James Ranch Unit Drilling Island 1 Eddy County, New Mexico	TE012919259

Photo No.	Date	
9	May 7, 2021	
Mechanical excavation extent along access road (NRM2002747253)		

Photo No.	Date	
10	May 19, 2021	
Western view of the excavation extent for nAB1805036031.		



PHOTOGRAPHIC LOG		
XTO ENERGY, INC.	James Ranch Unit Drilling Island 1 Eddy County, New Mexico	TE012919259

Photo No. 11	Date May 19, 2021	
Northwestern view of the excavation extent for nAB1805036031.		

Photo No. 12	Date May 19, 2021	
Northwestern view of the excavation extent for nAB1805036031.		



PHOTOGRAPHIC LOG

XTO ENERGY, INC.	James Ranch Unit Drilling Island 1 Eddy County, New Mexico	TE012919259
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Photo No.	Date	
13	May 4, 2021	
Northwestern view of the excavation extent for nHMP1411836637.		

Photo No.	Date	
14	May 21, 2021	
Western view of the final excavation extent for nHMP1411836637.		

ATTACHMENT 1: LITHOLOGIC/SOIL SAMPLING LOGS



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-504-1
Laboratory Sample Delivery Group: Eddy
Client Project/Site: JRU D11
Revision: 1

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

Attn: Dan Moir

Authorized for release by:
4/20/2021 6:42:21 PM

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



LINKS

Review your project
results through
Total Access

Have a Question?



Visit us at:
www.eurofinsus.com/Env

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

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

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- 10
- 11
- 12
- 13
- 14

Client: WSP USA Inc.
Project/Site: JRU DI1

Laboratory Job ID: 890-504-1
SDG: Eddy

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QC Sample Results	8
QC Association Summary	15
Lab Chronicle	17
Certification Summary	18
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Sample Summary	20
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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-504-1
SDG: Eddy

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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
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

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Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-504-1
SDG: Eddy

Job ID: 890-504-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-504-1

Receipt

The samples were received on 4/8/2021 10:00 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 1.0°C

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: LDP01-NE (890-504-1), LDP01A-NE (890-504-2), LDP01B-NE (890-504-3), LDP01C-NE (890-504-4) and LDP01D-NE (890-504-5).

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: JRU DI1Job ID: 890-504-1
SDG: Eddy

Client Sample ID: LDP01-NE

Lab Sample ID: 890-504-1

Date Collected: 04/07/21 14:39

Matrix: Solid

Date Received: 04/08/21 10:00

Sample Depth: - 5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/09/21 15:52	04/10/21 18:52	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/09/21 15:52	04/10/21 18:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/09/21 15:52	04/10/21 18:52	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/09/21 15:52	04/10/21 18:52	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/09/21 15:52	04/10/21 18:52	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/09/21 15:52	04/10/21 18:52	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/09/21 15:52	04/10/21 18:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	132	S1+	70 - 130	04/09/21 15:52	04/10/21 18:52	1
1,4-Difluorobenzene (Surr)	103		70 - 130	04/09/21 15:52	04/10/21 18:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 00:26	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 00:26	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 00:26	1
Total TPH	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 00:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	04/08/21 15:43	04/09/21 00:26	1
o-Terphenyl	106		70 - 130	04/08/21 15:43	04/09/21 00:26	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1990		25.0	mg/Kg			04/09/21 11:53	5

Client Sample ID: LDP01D-NE

Lab Sample ID: 890-504-5

Date Collected: 04/07/21 15:12

Matrix: Solid

Date Received: 04/08/21 10:00

Sample Depth: - 24.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U F2 F1	0.00198	mg/Kg		04/20/21 09:01	04/20/21 12:41	1
Toluene	<0.00198	U F2 F1	0.00198	mg/Kg		04/20/21 09:01	04/20/21 12:41	1
Ethylbenzene	<0.00198	U F1	0.00198	mg/Kg		04/20/21 09:01	04/20/21 12:41	1
m-Xylene & p-Xylene	<0.00396	U F1	0.00396	mg/Kg		04/20/21 09:01	04/20/21 12:41	1
o-Xylene	<0.00198	U F1	0.00198	mg/Kg		04/20/21 09:01	04/20/21 12:41	1
Xylenes, Total	<0.00396	U F1	0.00396	mg/Kg		04/20/21 09:01	04/20/21 12:41	1
Total BTEX	<0.00396	U F2 F1	0.00396	mg/Kg		04/20/21 09:01	04/20/21 12:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130	04/20/21 09:01	04/20/21 12:41	1
1,4-Difluorobenzene (Surr)	108		70 - 130	04/20/21 09:01	04/20/21 12:41	1

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Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-504-1
SDG: Eddy

Client Sample ID: LDP01D-NE
Date Collected: 04/07/21 15:12
Date Received: 04/08/21 10:00
Sample Depth: - 24.5'

Lab Sample ID: 890-504-5
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/19/21 14:03	04/20/21 10:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/19/21 14:03	04/20/21 10:43	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/19/21 14:03	04/20/21 10:43	1
Total TPH	<49.9	U	49.9	mg/Kg		04/19/21 14:03	04/20/21 10:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	118		70 - 130	04/19/21 14:03	04/20/21 10:43	1
o-Terphenyl	130		70 - 130	04/19/21 14:03	04/20/21 10:43	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	204		49.6	mg/Kg			04/19/21 22:16	10

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-504-1
SDG: Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-504-1	LDP01-NE	132 S1+	103
890-504-5	LDP01D-NE	88	108
890-504-5 MS	LDP01D-NE	102	101
890-504-5 MSD	LDP01D-NE	110	109
LCS 880-1599/1-A	Lab Control Sample	98	101
LCS 880-2024/1-A	Lab Control Sample	97	106
LCSD 880-1599/2-A	Lab Control Sample Dup	120	108
LCSD 880-2024/2-A	Lab Control Sample Dup	94	90
MB 880-1477/5-A	Method Blank	70	88
MB 880-1599/5-A	Method Blank	74	87
MB 880-2024/5-A	Method Blank	118	102

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
890-504-1	LDP01-NE	103	106
890-504-1 MS	LDP01-NE	101	90
890-504-1 MSD	LDP01-NE	98	87
890-504-5	LDP01D-NE	118	130
LCS 880-1546/2-A	Lab Control Sample	109	104
LCS 880-1998/2-A	Lab Control Sample	123	115
LCSD 880-1546/3-A	Lab Control Sample Dup	106	104
LCSD 880-1998/3-A	Lab Control Sample Dup	121	107
MB 880-1546/1-A	Method Blank	109	117
MB 880-1998/1-A	Method Blank	113	111

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-504-1
SDG: Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-1477/5-A
Matrix: Solid
Analysis Batch: 1603Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1477

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		04/07/21 16:15	04/09/21 19:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/07/21 16:15	04/09/21 19:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/07/21 16:15	04/09/21 19:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/07/21 16:15	04/09/21 19:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/07/21 16:15	04/09/21 19:53	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/07/21 16:15	04/09/21 19:53	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/07/21 16:15	04/09/21 19:53	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	70		70 - 130	04/07/21 16:15	04/09/21 19:53	1
1,4-Difluorobenzene (Surr)	88		70 - 130	04/07/21 16:15	04/09/21 19:53	1

Lab Sample ID: MB 880-1599/5-A
Matrix: Solid
Analysis Batch: 1603Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1599

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		04/09/21 15:52	04/10/21 09:06	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/09/21 15:52	04/10/21 09:06	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/09/21 15:52	04/10/21 09:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/09/21 15:52	04/10/21 09:06	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/09/21 15:52	04/10/21 09:06	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/09/21 15:52	04/10/21 09:06	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/09/21 15:52	04/10/21 09:06	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	74		70 - 130	04/09/21 15:52	04/10/21 09:06	1
1,4-Difluorobenzene (Surr)	87		70 - 130	04/09/21 15:52	04/10/21 09:06	1

Lab Sample ID: LCS 880-1599/1-A
Matrix: Solid
Analysis Batch: 1603Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1599

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	0.100	0.1053		mg/Kg		105	70 - 130
Ethylbenzene	0.100	0.09463		mg/Kg		95	70 - 130
m-Xylene & p-Xylene	0.200	0.1904		mg/Kg		95	70 - 130
o-Xylene	0.100	0.1042		mg/Kg		104	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-504-1
SDG: Eddy

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

Lab Sample ID: LCSD 880-1599/2-A
Matrix: Solid
Analysis Batch: 1603

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1599

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.1068		mg/Kg		107	70 - 130	10	35
Toluene	0.100	0.1175		mg/Kg		118	70 - 130	11	35
Ethylbenzene	0.100	0.1068		mg/Kg		107	70 - 130	12	35
m-Xylene & p-Xylene	0.200	0.2167		mg/Kg		108	70 - 130	13	35
o-Xylene	0.100	0.1202		mg/Kg		120	70 - 130	14	35

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	120		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: MB 880-2024/5-A
Matrix: Solid
Analysis Batch: 2025

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2024

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/20/21 09:01	04/20/21 12:19	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/20/21 09:01	04/20/21 12:19	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/20/21 09:01	04/20/21 12:19	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/20/21 09:01	04/20/21 12:19	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/20/21 09:01	04/20/21 12:19	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/20/21 09:01	04/20/21 12:19	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		04/20/21 09:01	04/20/21 12:19	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130	04/20/21 09:01	04/20/21 12:19	1
1,4-Difluorobenzene (Surr)	102		70 - 130	04/20/21 09:01	04/20/21 12:19	1

Lab Sample ID: LCS 880-2024/1-A
Matrix: Solid
Analysis Batch: 2025

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2024

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.08914		mg/Kg		89	70 - 130
Toluene	0.100	0.1005		mg/Kg		100	70 - 130
Ethylbenzene	0.100	0.09956		mg/Kg		100	70 - 130
m-Xylene & p-Xylene	0.200	0.2030		mg/Kg		101	70 - 130
o-Xylene	0.100	0.09958		mg/Kg		100	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: LCSD 880-2024/2-A
Matrix: Solid
Analysis Batch: 2025

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2024

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.07370		mg/Kg		74	70 - 130	19	35

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-504-1
SDG: Eddy

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

Lab Sample ID: LCSD 880-2024/2-A
Matrix: Solid
Analysis Batch: 2025

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2024

Analyte	Spike Added	LCS D Result	LCS D Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit	
Toluene	0.100	0.09172		mg/Kg		92	70 - 130	9	35	
Ethylbenzene	0.100	0.09194		mg/Kg		92	70 - 130	8	35	
m-Xylene & p-Xylene	0.200	0.1876		mg/Kg		94	70 - 130	8	35	
o-Xylene	0.100	0.09322		mg/Kg		93	70 - 130	7	35	
		LCS D	LCS D							
Surrogate	%Recovery	Qualifier	Limits							
4-Bromofluorobenzene (Surr)	94		70 - 130							
1,4-Difluorobenzene (Surr)	90		70 - 130							

Lab Sample ID: 890-504-5 MS
Matrix: Solid
Analysis Batch: 2025

Client Sample ID: LDP01D-NE
Prep Type: Total/NA
Prep Batch: 2024

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00198	U F2 F1	0.0992	0.01865	F1	mg/Kg		18	70 - 130		
Toluene	<0.00198	U F2 F1	0.0992	0.02870	F1	mg/Kg		29	70 - 130		
Ethylbenzene	<0.00198	U F1	0.0992	0.03009	F1	mg/Kg		30	70 - 130		
m-Xylene & p-Xylene	<0.00396	U F1	0.198	0.05198	F1	mg/Kg		26	70 - 130		
o-Xylene	<0.00198	U F1	0.0992	0.03611	F1	mg/Kg		36	70 - 130		
		MS	MS								
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	102		70 - 130								
1,4-Difluorobenzene (Surr)	101		70 - 130								

Lab Sample ID: 890-504-5 MSD
Matrix: Solid
Analysis Batch: 2025

Client Sample ID: LDP01D-NE
Prep Type: Total/NA
Prep Batch: 2024

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00198	U F2 F1	0.0990	0.04074	F2 F1	mg/Kg		40	70 - 130	74	35
Toluene	<0.00198	U F2 F1	0.0990	0.04567	F2 F1	mg/Kg		46	70 - 130	46	35
Ethylbenzene	<0.00198	U F1	0.0990	0.04152	F1	mg/Kg		42	70 - 130	32	35
m-Xylene & p-Xylene	<0.00396	U F1	0.198	0.06976	F1	mg/Kg		35	70 - 130	29	35
o-Xylene	<0.00198	U F1	0.0990	0.04767	F1	mg/Kg		48	70 - 130	28	35
		MSD	MSD								
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	110		70 - 130								
1,4-Difluorobenzene (Surr)	109		70 - 130								

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

Lab Sample ID: MB 880-1546/1-A
Matrix: Solid
Analysis Batch: 1499

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1546

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/08/21 15:43	04/08/21 23:23	1

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-504-1
SDG: Eddy

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

Lab Sample ID: MB 880-1546/1-A
Matrix: Solid
Analysis Batch: 1499

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1546

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/08/21 15:43	04/08/21 23:23	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/08/21 15:43	04/08/21 23:23	1
Total TPH	<50.0	U	50.0	mg/Kg		04/08/21 15:43	04/08/21 23:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130	04/08/21 15:43	04/08/21 23:23	1
o-Terphenyl	117		70 - 130	04/08/21 15:43	04/08/21 23:23	1

Lab Sample ID: LCS 880-1546/2-A
Matrix: Solid
Analysis Batch: 1499

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1546

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1157		mg/Kg		116	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1077		mg/Kg		108	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	109		70 - 130
o-Terphenyl	104		70 - 130

Lab Sample ID: LCSD 880-1546/3-A
Matrix: Solid
Analysis Batch: 1499

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1546

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1152		mg/Kg		115	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	1000	1117		mg/Kg		112	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	104		70 - 130

Lab Sample ID: 890-504-1 MS
Matrix: Solid
Analysis Batch: 1499

Client Sample ID: LDP01-NE
Prep Type: Total/NA
Prep Batch: 1546

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1300		mg/Kg		128	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1238		mg/Kg		122	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	101		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-504-1
SDG: Eddy

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

Lab Sample ID: 890-504-1 MS
Matrix: Solid
Analysis Batch: 1499

Client Sample ID: LDP01-NE
Prep Type: Total/NA
Prep Batch: 1546

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl	90		70 - 130

Lab Sample ID: 890-504-1 MSD
Matrix: Solid
Analysis Batch: 1499

Client Sample ID: LDP01-NE
Prep Type: Total/NA
Prep Batch: 1546

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1255		mg/Kg		123	70 - 130	3		20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1231		mg/Kg		121	70 - 130	1		20

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	98		70 - 130
<i>o</i> -Terphenyl	87		70 - 130

Lab Sample ID: MB 880-1998/1-A
Matrix: Solid
Analysis Batch: 1967

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1998

Analyte	MB MB		RL	Unit	D	Prepared		Analyzed		Dil Fac
	Result	Qualifier				Time	Time			
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/19/21 14:03	04/20/21 07:51			1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/19/21 14:03	04/20/21 07:51			1
Oil Range Organics (Over C28-C36)	104.0		50.0	mg/Kg		04/19/21 14:03	04/20/21 07:51			1
Total TPH	104.0		50.0	mg/Kg		04/19/21 14:03	04/20/21 07:51			1

Surrogate	MB MB		Limits	Prepared		Analyzed		Dil Fac
	%Recovery	Qualifier		Time	Time			
1-Chlorooctane	113		70 - 130	04/19/21 14:03		04/20/21 07:51		1
<i>o</i> -Terphenyl	111		70 - 130	04/19/21 14:03		04/20/21 07:51		1

Lab Sample ID: LCS 880-1998/2-A
Matrix: Solid
Analysis Batch: 1967

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1998

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	
Gasoline Range Organics (GRO)-C6-C10	1000	1142		mg/Kg		114	70 - 130	
Diesel Range Organics (Over C10-C28)	1000	1057		mg/Kg		106	70 - 130	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	123		70 - 130
<i>o</i> -Terphenyl	115		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-504-1
SDG: Eddy

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

Lab Sample ID: LCSD 880-1998/3-A
Matrix: Solid
Analysis Batch: 1967

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1998

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1177		mg/Kg		118	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	958.0		mg/Kg		96	70 - 130	10	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	107		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-1544/1-A
Matrix: Solid
Analysis Batch: 1568

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/09/21 09:29	1

Lab Sample ID: LCS 880-1544/2-A
Matrix: Solid
Analysis Batch: 1568

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	251.3		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-1544/3-A
Matrix: Solid
Analysis Batch: 1568

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	251.6		mg/Kg		101	90 - 110	0	20

Lab Sample ID: MB 880-1983/1-A
Matrix: Solid
Analysis Batch: 2015

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/19/21 20:30	1

Lab Sample ID: LCS 880-1983/2-A
Matrix: Solid
Analysis Batch: 2015

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	250.8		mg/Kg		100	90 - 110

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-504-1
SDG: Eddy

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-1983/3-A
Matrix: Solid
Analysis Batch: 2015

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	260.2		mg/Kg		104	90 - 110	4	20

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-504-1
SDG: Eddy

GC VOA

Prep Batch: 1477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-1477/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 1599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-504-1	LDP01-NE	Total/NA	Solid	5035	
MB 880-1599/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-1599/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-1599/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 1603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-504-1	LDP01-NE	Total/NA	Solid	8021B	1599
MB 880-1477/5-A	Method Blank	Total/NA	Solid	8021B	1477
MB 880-1599/5-A	Method Blank	Total/NA	Solid	8021B	1599
LCS 880-1599/1-A	Lab Control Sample	Total/NA	Solid	8021B	1599
LCSD 880-1599/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	1599

Prep Batch: 2024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-504-5	LDP01D-NE	Total/NA	Solid	5035	
MB 880-2024/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2024/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2024/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-504-5 MS	LDP01D-NE	Total/NA	Solid	5035	
890-504-5 MSD	LDP01D-NE	Total/NA	Solid	5035	

Analysis Batch: 2025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-504-5	LDP01D-NE	Total/NA	Solid	8021B	2024
MB 880-2024/5-A	Method Blank	Total/NA	Solid	8021B	2024
LCS 880-2024/1-A	Lab Control Sample	Total/NA	Solid	8021B	2024
LCSD 880-2024/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2024
890-504-5 MS	LDP01D-NE	Total/NA	Solid	8021B	2024
890-504-5 MSD	LDP01D-NE	Total/NA	Solid	8021B	2024

GC Semi VOA

Analysis Batch: 1499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-504-1	LDP01-NE	Total/NA	Solid	8015B NM	1546
MB 880-1546/1-A	Method Blank	Total/NA	Solid	8015B NM	1546
LCS 880-1546/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	1546
LCSD 880-1546/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	1546
890-504-1 MS	LDP01-NE	Total/NA	Solid	8015B NM	1546
890-504-1 MSD	LDP01-NE	Total/NA	Solid	8015B NM	1546

Prep Batch: 1546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-504-1	LDP01-NE	Total/NA	Solid	8015NM Prep	
MB 880-1546/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-1546/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-504-1
SDG: Eddy

GC Semi VOA (Continued)

Prep Batch: 1546 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-1546/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-504-1 MS	LDP01-NE	Total/NA	Solid	8015NM Prep	
890-504-1 MSD	LDP01-NE	Total/NA	Solid	8015NM Prep	

Analysis Batch: 1967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-504-5	LDP01D-NE	Total/NA	Solid	8015B NM	1998
MB 880-1998/1-A	Method Blank	Total/NA	Solid	8015B NM	1998
LCS 880-1998/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	1998
LCSD 880-1998/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	1998

Prep Batch: 1998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-504-5	LDP01D-NE	Total/NA	Solid	8015NM Prep	
MB 880-1998/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-1998/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-1998/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 1544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-504-1	LDP01-NE	Soluble	Solid	DI Leach	
MB 880-1544/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-1544/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-1544/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 1568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-504-1	LDP01-NE	Soluble	Solid	300.0	1544
MB 880-1544/1-A	Method Blank	Soluble	Solid	300.0	1544
LCS 880-1544/2-A	Lab Control Sample	Soluble	Solid	300.0	1544
LCSD 880-1544/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	1544

Leach Batch: 1983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-504-5	LDP01D-NE	Soluble	Solid	DI Leach	
MB 880-1983/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-1983/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-1983/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 2015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-504-5	LDP01D-NE	Soluble	Solid	300.0	1983
MB 880-1983/1-A	Method Blank	Soluble	Solid	300.0	1983
LCS 880-1983/2-A	Lab Control Sample	Soluble	Solid	300.0	1983
LCSD 880-1983/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	1983

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-504-1
SDG: Eddy

Client Sample ID: LDP01-NE

Lab Sample ID: 890-504-1

Date Collected: 04/07/21 14:39

Matrix: Solid

Date Received: 04/08/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1599	04/09/21 15:52	MR	XM
Total/NA	Analysis	8021B		1	1603	04/10/21 18:52	MR	XM
Total/NA	Prep	8015NM Prep			1546	04/08/21 15:43	DM	XM
Total/NA	Analysis	8015B NM		1	1499	04/09/21 00:26	AJ	XM
Soluble	Leach	DI Leach			1544	04/08/21 15:31	CH	XM
Soluble	Analysis	300.0		5	1568	04/09/21 11:53	CH	XM

Client Sample ID: LDP01D-NE

Lab Sample ID: 890-504-5

Date Collected: 04/07/21 15:12

Matrix: Solid

Date Received: 04/08/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2024	04/20/21 09:01	KL	XM
Total/NA	Analysis	8021B		1	2025	04/20/21 12:41	KL	XM
Total/NA	Prep	8015NM Prep			1998	04/19/21 14:03	DM	XM
Total/NA	Analysis	8015B NM		1	1967	04/20/21 10:43	AJ	XM
Soluble	Leach	DI Leach			1983	04/19/21 17:00	SC	XM
Soluble	Analysis	300.0		10	2015	04/19/21 22:16	CH	XM

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-504-1
SDG: Eddy

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-504-1
SDG: Eddy

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-504-1
SDG: Eddy

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-504-1	LDP01-NE	Solid	04/07/21 14:39	04/08/21 10:00	- 5'
890-504-5	LDP01D-NE	Solid	04/07/21 15:12	04/08/21 10:00	- 24.5'

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

Chain of Custody

Work Order No: _____

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA Inc. Permittion office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	(432) 236-3849	Email:	will.mather@wsp.com, dan.moir@wsp.com

Program: UST/PST RP Rowfields RC \$perfund

State of Project: Level II Level III PT/UST RP Level IV

Reporting Level: EDD ADAPT Other: _____

Project Name: JRU D11 Turn Around

Project Number: TE012919259 Routine Rush: 24 HR

P.O. Number: Eddy

Sampler's Name: William Mather Due Date: 4/9/21

SAMPLE RECEIPT Temp Blank: Yes No Wet Ice: Yes No

Temperature (°C): 1.2 / 1.0 Thermometer ID: 211A-057

Received Intact: Yes No Correction Factor: -0.2

Cooler Custody Seals: Yes No Total Containers: _____

Sample Custody Seals: Yes No



Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
LDP01-NE	S	4/7/2021	14:39	5'	1	X	X	X		Discrete
LDP01A-NE	S	4/7/2021	14:45	10'	1	X	X	X		Discrete
LDP01B-NE	S	4/7/2021	14:52	15'	1	X	X	X		Discrete
LDP01C-NE	S	4/7/2021	15:01	20'	1	X	X	X		Discrete
LDP01D-NE	S	4/7/2021	15:12	24.5'	1	X	X	X		Discrete

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

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

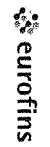
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	09/14/18	<i>[Signature]</i>	<i>[Signature]</i>	4-8-21 1000

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Eurofins Xenco, Carlisbad

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

Chain of Custody Record



Environment Testing
America

Client Information (Sub Contract Lab)		Sampler	Lab PM	Carrier Tracking No(s)	COC No				
Client Contact:	Phone	Kramer Jessica	E-Mail	State of Origin	890-155-1				
Company:	Eurofins Xenco	Jessica.kramer@eurofinsel.com	Accreditations Required (See note)	New Mexico	Page 1 of 1				
Address:	1211 W Florida Ave	NE LAP - Louisiana NE LAP - Texas	Job #:	890-504-1	Page 1 of 1				
City:	Midland	Due Date Requested	Analysis Requested						
State, Zip:	TX 79701	4/9/2021	TAT Requested (days)						
Phone:	432-704-5440(Tel)	PO #	Field Filtered Sample (Yes or No)						
Email:		WO #	Perform MS/MSD (Yes or No)						
Project Name:	JRU D1	Project #:	8016MOD_NM/8016NM_S_Prep Full TPH						
Site:		SSOW#:	300_ORGFM_28D/DI_LEACH Chloride						
			8021B/6036FP_Calc BTEX						
			Total Number of containers						
			Special Instructions/Note:						
			A - HCl B NaOH C Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Amchlor H Ascorbic Acid I Ice J DI Water K EDTA L EDA Other M Hexane N None O AsH2O2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U - Acetone V MCAA W pH 4.5 Z other (specify)						
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=Wastebott, B=Tristate, A=Al)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:
LDP01-NE (890-504-1)	4/7/21	14 39	Mountain	Solid		X	X	1	
LDP01A-NE (890-504-2)	4/7/21	14 45	Mountain	Solid		X	X	1	
LDP01B-NE (890-504-3)	4/7/21	14 52	Mountain	Solid		X	X	1	
LDP01C-NE (890-504-4)	4/7/21	15 01	Mountain	Solid		X	X	1	
LDP01D-NE (890-504-5)	4/7/21	15 12	Mountain	Solid		X	X	1	

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

Possible Hazard Identification
Unconfirmed

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

Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: *Cecilia* Date/Time: _____ Company: _____ Received by: _____ Date/Time: _____ Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____ Received by: _____ Date/Time: _____ Company: _____

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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements

- 1
- 2
- 3
- 4
- 5
- 6
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- 14

Notes to Field Staff:

Bottle Order
 Bottle Order #
 Request From Client 4/8/2021
 Date Order Posted
 Order Status
 Prepared By
 Deliver By Date: 4/8/2021 11:59:00PM
 Lab Project Number

Order Completion Information

Creator Cioe Clifton
 Filled by
 Sent Date
 Sent Via
 Tracking #

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
------	-------------	-----	-------------------------	--------------	--------	--------	-------------	----------	-------



Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative
 Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #	Seal #	Seal #	Seal #
Joe Cliff	U.S.C.P								

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

Chain of Custody Record



Environment Testing America

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

Client Information (Sub Contract Lab)	Sampler	Lab PM	Carrier Tracking No(s)	COC No:
Client Contact:	Phone	Kramer, Jessica		890-155-1
Shipping/Receiving		E-Mail	State of Origin	Page
Company		Jessica.kramer@eurofins.com	New Mexico	Page 1 of 1
Eurofins Xenco		Accreditations Required (See note)	NELAP - Louisiana NELAP - Texas	Job #:
Address:	Due Date Requested			890-504-1
1211 W. Florida Ave.,	4/9/2021			
City:	TAT Requested (days)			
Midland				
State Zip:				
TX, 79701				
Phone:	PO #			
432-704-5440(Tel)				
Email:	WO #			
Project Name:	Project #:			
JRU D11	89000004			
Site:	SSOV#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Soil, O=Other)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of containers	Special Instructions/Note:
					IR-Triple A-M	IR-Triple A-M	IR-Triple A-M	IR-Triple A-M		
LDP01-NE (890-504-1)	4/7/21	14:39	Mountain	Solid	X	X	X	X	1	
LDP01A-NE (890-504-2)	4/7/21	14:45	Mountain	Solid	X	X	X	X	1	
LDP01B-NE (890-504-3)	4/7/21	14:52	Mountain	Solid	X	X	X	X	1	
LDP01C-NE (890-504-4)	4/7/21	15:01	Mountain	Solid	X	X	X	X	1	
LDP01D-NE (890-504-5)	4/7/21	15:12	Mountain	Solid	X	X	X	X	1	

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

Possible Hazard Identification

Unconfirmed

Deliverable Requested: I II III IV Other (specify) _____

Primary Deliverable Rank: 2

Special Instructions/QC Requirements: _____

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

Return To Client Disposal By Lab Archive For _____ Months

Empty Kit Relinquished by	Date	Time	Method of Shipment
Relinquished by	Date/Time:	Company	
Relinquished by	Date/Time:	Company	
Relinquished by	Date/Time:	Company	
Custody Seals Intact	Custody Seal No	Received by	Received by
A Yes A No		Cooler Temperature(s) °C and Other Remarks	

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-504-1

SDG Number: Eddy

Login Number: 504

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-504-1

SDG Number: Eddy

Login Number: 504

List Number: 2

Creator: Copeland, Tatiana

List Source: Eurofins Midland

List Creation: 04/08/21 03:35 PM

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

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-505-1
Laboratory Sample Delivery Group: Eddy
Client Project/Site: JRU D11

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

Attn: Dan Moir

Authorized for release by:
4/13/2021 1:58:28 PM

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



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www.eurofinsus.com/Env

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

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

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Client: WSP USA Inc.
Project/Site: JRU DI1

Laboratory Job ID: 890-505-1
SDG: Eddy

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-505-1
SDG: Eddy

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-505-1
SDG: Eddy

Job ID: 890-505-1

Laboratory: Eurofins Xenco, Carlsbad**Narrative**

**Job Narrative
890-505-1**

Receipt

The samples were received on 4/8/2021 10:00 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 1.0°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.

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Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-505-1
SDG: Eddy

Client Sample ID: LDP01-SW

Lab Sample ID: 890-505-1

Date Collected: 04/07/21 09:50

Matrix: Solid

Date Received: 04/08/21 10:00

Sample Depth: - 5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/08/21 15:00	04/09/21 08:20	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/08/21 15:00	04/09/21 08:20	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/08/21 15:00	04/09/21 08:20	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/08/21 15:00	04/09/21 08:20	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/08/21 15:00	04/09/21 08:20	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/08/21 15:00	04/09/21 08:20	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/08/21 15:00	04/09/21 08:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130	04/08/21 15:00	04/09/21 08:20	1
1,4-Difluorobenzene (Surr)	102		70 - 130	04/08/21 15:00	04/09/21 08:20	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 01:30	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 01:30	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 01:30	1
Total TPH	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 01:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130	04/08/21 15:43	04/09/21 01:30	1
o-Terphenyl	99		70 - 130	04/08/21 15:43	04/09/21 01:30	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	488		5.04	mg/Kg			04/13/21 10:16	1

Client Sample ID: LDP01 B-SW

Lab Sample ID: 890-505-3

Date Collected: 04/07/21 11:00

Matrix: Solid

Date Received: 04/08/21 10:00

Sample Depth: - 13

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/08/21 15:00	04/09/21 08:40	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/08/21 15:00	04/09/21 08:40	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/08/21 15:00	04/09/21 08:40	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/08/21 15:00	04/09/21 08:40	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/08/21 15:00	04/09/21 08:40	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/08/21 15:00	04/09/21 08:40	1
Total BTEX	<0.00199	U	0.00199	mg/Kg		04/08/21 15:00	04/09/21 08:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130	04/08/21 15:00	04/09/21 08:40	1
1,4-Difluorobenzene (Surr)	100		70 - 130	04/08/21 15:00	04/09/21 08:40	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-505-1
SDG: Eddy

Client Sample ID: LDP01 B-SW

Lab Sample ID: 890-505-3

Date Collected: 04/07/21 11:00

Matrix: Solid

Date Received: 04/08/21 10:00

Sample Depth: - 13

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	57.8		49.8	mg/Kg		04/08/21 15:43	04/09/21 01:51	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		04/08/21 15:43	04/09/21 01:51	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		04/08/21 15:43	04/09/21 01:51	1
Total TPH	57.8		49.8	mg/Kg		04/08/21 15:43	04/09/21 01:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130	04/08/21 15:43	04/09/21 01:51	1
o-Terphenyl	94		70 - 130	04/08/21 15:43	04/09/21 01:51	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	37.6		4.97	mg/Kg			04/13/21 10:27	1

Client Sample ID: LDP02-SW

Lab Sample ID: 890-505-4

Date Collected: 04/07/21 12:50

Matrix: Solid

Date Received: 04/08/21 10:00

Sample Depth: - 5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		04/08/21 15:00	04/09/21 09:01	1
Toluene	<0.00198	U	0.00198	mg/Kg		04/08/21 15:00	04/09/21 09:01	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		04/08/21 15:00	04/09/21 09:01	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		04/08/21 15:00	04/09/21 09:01	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		04/08/21 15:00	04/09/21 09:01	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		04/08/21 15:00	04/09/21 09:01	1
Total BTEX	<0.00198	U	0.00198	mg/Kg		04/08/21 15:00	04/09/21 09:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	04/08/21 15:00	04/09/21 09:01	1
1,4-Difluorobenzene (Surr)	99		70 - 130	04/08/21 15:00	04/09/21 09:01	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 02:11	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 02:11	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 02:11	1
Total TPH	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 02:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	04/08/21 15:43	04/09/21 02:11	1
o-Terphenyl	105		70 - 130	04/08/21 15:43	04/09/21 02:11	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	552		49.9	mg/Kg			04/13/21 06:42	10

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-505-1
SDG: Eddy

Client Sample ID: LD02 B-SW

Lab Sample ID: 890-505-6

Date Collected: 04/07/21 13:05

Matrix: Solid

Date Received: 04/08/21 10:00

Sample Depth: - 13

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/08/21 15:00	04/09/21 09:21	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/08/21 15:00	04/09/21 09:21	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/08/21 15:00	04/09/21 09:21	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		04/08/21 15:00	04/09/21 09:21	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/08/21 15:00	04/09/21 09:21	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		04/08/21 15:00	04/09/21 09:21	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/08/21 15:00	04/09/21 09:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		70 - 130	04/08/21 15:00	04/09/21 09:21	1
1,4-Difluorobenzene (Surr)	85		70 - 130	04/08/21 15:00	04/09/21 09:21	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 02:32	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 02:32	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 02:32	1
Total TPH	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 02:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130	04/08/21 15:43	04/09/21 02:32	1
o-Terphenyl	92		70 - 130	04/08/21 15:43	04/09/21 02:32	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.2		4.98	mg/Kg			04/13/21 10:33	1

Client Sample ID: LD03-SW

Lab Sample ID: 890-505-7

Date Collected: 04/07/21 13:37

Matrix: Solid

Date Received: 04/08/21 10:00

Sample Depth: - 5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/12/21 16:18	04/13/21 02:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/12/21 16:18	04/13/21 02:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/12/21 16:18	04/13/21 02:12	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/12/21 16:18	04/13/21 02:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/12/21 16:18	04/13/21 02:12	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/12/21 16:18	04/13/21 02:12	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/12/21 16:18	04/13/21 02:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	127		70 - 130	04/12/21 16:18	04/13/21 02:12	1
1,4-Difluorobenzene (Surr)	107		70 - 130	04/12/21 16:18	04/13/21 02:12	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-505-1
SDG: Eddy

Client Sample ID: LD03-SW

Lab Sample ID: 890-505-7

Date Collected: 04/07/21 13:37

Matrix: Solid

Date Received: 04/08/21 10:00

Sample Depth: - 5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 02:53	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 02:53	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 02:53	1
Total TPH	<49.9	U	49.9	mg/Kg		04/08/21 15:43	04/09/21 02:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	04/08/21 15:43	04/09/21 02:53	1
o-Terphenyl	98		70 - 130	04/08/21 15:43	04/09/21 02:53	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7070		100	mg/Kg			04/13/21 06:53	20

Client Sample ID: LD03 B-SW

Lab Sample ID: 890-505-9

Date Collected: 04/07/21 13:52

Matrix: Solid

Date Received: 04/08/21 10:00

Sample Depth: - 13

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/12/21 16:18	04/13/21 02:37	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/12/21 16:18	04/13/21 02:37	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/12/21 16:18	04/13/21 02:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/12/21 16:18	04/13/21 02:37	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/12/21 16:18	04/13/21 02:37	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/12/21 16:18	04/13/21 02:37	1
Total BTEX	<0.00199	U	0.00199	mg/Kg		04/12/21 16:18	04/13/21 02:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130	04/12/21 16:18	04/13/21 02:37	1
1,4-Difluorobenzene (Surr)	107		70 - 130	04/12/21 16:18	04/13/21 02:37	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/08/21 15:43	04/09/21 03:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/08/21 15:43	04/09/21 03:15	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/08/21 15:43	04/09/21 03:15	1
Total TPH	<50.0	U	50.0	mg/Kg		04/08/21 15:43	04/09/21 03:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130	04/08/21 15:43	04/09/21 03:15	1
o-Terphenyl	96		70 - 130	04/08/21 15:43	04/09/21 03:15	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	229		5.00	mg/Kg			04/13/21 10:38	1

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-505-1
SDG: Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-505-1	LDP01-SW	115	102
890-505-3	LDP01 B-SW	117	100
890-505-4	LDP02-SW	112	99
890-505-6	LD02 B-SW	126	85
890-505-7	LD03-SW	127	107
890-505-9	LD03 B-SW	129	107
LCS 880-1480/1-A	Lab Control Sample	104	100
LCS 880-1681/1-A	Lab Control Sample	103	105
LCSD 880-1480/2-A	Lab Control Sample Dup	104	99
LCSD 880-1681/2-A	Lab Control Sample Dup	112	110
MB 880-1480/5-A	Method Blank	108	94
MB 880-1527/8	Method Blank	105	96
MB 880-1681/5-A	Method Blank	71	88

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-505-1	LDP01-SW	99	99
890-505-3	LDP01 B-SW	94	94
890-505-4	LDP02-SW	103	105
890-505-6	LD02 B-SW	93	92
890-505-7	LD03-SW	97	98
890-505-9	LD03 B-SW	94	96
LCS 880-1546/2-A	Lab Control Sample	109	104
LCSD 880-1546/3-A	Lab Control Sample Dup	106	104
MB 880-1546/1-A	Method Blank	109	117

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-505-1
SDG: Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-1480/5-A
Matrix: Solid
Analysis Batch: 1527

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1480

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/08/21 15:00	04/09/21 02:37	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/08/21 15:00	04/09/21 02:37	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/08/21 15:00	04/09/21 02:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/08/21 15:00	04/09/21 02:37	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/08/21 15:00	04/09/21 02:37	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/08/21 15:00	04/09/21 02:37	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/08/21 15:00	04/09/21 02:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	04/08/21 15:00	04/09/21 02:37	1
1,4-Difluorobenzene (Surr)	94		70 - 130	04/08/21 15:00	04/09/21 02:37	1

Lab Sample ID: LCS 880-1480/1-A
Matrix: Solid
Analysis Batch: 1527

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1480

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.1105		mg/Kg		111	70 - 130
Toluene	0.100	0.1160		mg/Kg		116	70 - 130
Ethylbenzene	0.100	0.1180		mg/Kg		118	70 - 130
m-Xylene & p-Xylene	0.200	0.2406		mg/Kg		120	70 - 130
o-Xylene	0.100	0.1190		mg/Kg		119	70 - 130

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

Lab Sample ID: LCSD 880-1480/2-A
Matrix: Solid
Analysis Batch: 1527

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1480

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.1074		mg/Kg		107	70 - 130	3	35
Toluene	0.100	0.1107		mg/Kg		111	70 - 130	5	35
Ethylbenzene	0.100	0.1154		mg/Kg		115	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2366		mg/Kg		118	70 - 130	2	35
o-Xylene	0.100	0.1163		mg/Kg		116	70 - 130	2	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: MB 880-1527/8
Matrix: Solid
Analysis Batch: 1527

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg			04/08/21 16:03	1

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-505-1
SDG: Eddy

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

Lab Sample ID: MB 880-1527/8

Matrix: Solid

Analysis Batch: 1527

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.00200	U	0.00200	mg/Kg			04/08/21 16:03	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg			04/08/21 16:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg			04/08/21 16:03	1
o-Xylene	<0.00200	U	0.00200	mg/Kg			04/08/21 16:03	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg			04/08/21 16:03	1
Total BTEX	<0.00200	U	0.00200	mg/Kg			04/08/21 16:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130		04/08/21 16:03	1
1,4-Difluorobenzene (Surr)	96		70 - 130		04/08/21 16:03	1

Lab Sample ID: MB 880-1681/5-A

Matrix: Solid

Analysis Batch: 1638

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 1681

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/12/21 16:18	04/12/21 18:07	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/12/21 16:18	04/12/21 18:07	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/12/21 16:18	04/12/21 18:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/12/21 16:18	04/12/21 18:07	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/12/21 16:18	04/12/21 18:07	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/12/21 16:18	04/12/21 18:07	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/12/21 16:18	04/12/21 18:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		70 - 130	04/12/21 16:18	04/12/21 18:07	1
1,4-Difluorobenzene (Surr)	88		70 - 130	04/12/21 16:18	04/12/21 18:07	1

Lab Sample ID: LCS 880-1681/1-A

Matrix: Solid

Analysis Batch: 1638

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 1681

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.1082		mg/Kg		108	70 - 130
Toluene	0.100	0.1180		mg/Kg		118	70 - 130
Ethylbenzene	0.100	0.1085		mg/Kg		109	70 - 130
m-Xylene & p-Xylene	0.200	0.2204		mg/Kg		110	70 - 130
o-Xylene	0.100	0.1176		mg/Kg		118	70 - 130

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

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-505-1
SDG: Eddy

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

Lab Sample ID: LCSD 880-1681/2-A
Matrix: Solid
Analysis Batch: 1638Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1681

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.1129		mg/Kg		113	70 - 130	4	35
Toluene	0.100	0.1215		mg/Kg		121	70 - 130	3	35
Ethylbenzene	0.100	0.1159		mg/Kg		116	70 - 130	7	35
m-Xylene & p-Xylene	0.200	0.2382		mg/Kg		119	70 - 130	8	35
o-Xylene	0.100	0.1297		mg/Kg		130	70 - 130	10	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

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

Lab Sample ID: MB 880-1546/1-A
Matrix: Solid
Analysis Batch: 1499Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1546

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/08/21 15:43	04/08/21 23:23	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/08/21 15:43	04/08/21 23:23	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/08/21 15:43	04/08/21 23:23	1
Total TPH	<50.0	U	50.0	mg/Kg		04/08/21 15:43	04/08/21 23:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130	04/08/21 15:43	04/08/21 23:23	1
o-Terphenyl	117		70 - 130	04/08/21 15:43	04/08/21 23:23	1

Lab Sample ID: LCS 880-1546/2-A
Matrix: Solid
Analysis Batch: 1499Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1546

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1157		mg/Kg		116	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1077		mg/Kg		108	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	109		70 - 130
o-Terphenyl	104		70 - 130

Lab Sample ID: LCSD 880-1546/3-A
Matrix: Solid
Analysis Batch: 1499Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1546

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1152		mg/Kg		115	70 - 130	0	20

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-505-1
SDG: Eddy

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

Lab Sample ID: LCSD 880-1546/3-A
Matrix: Solid
Analysis Batch: 1499

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1546

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (Over C10-C28)	1000	1117		mg/Kg		112	70 - 130	4	20
Surrogate		LCSD %Recovery	LCSD Qualifier				Limits		
1-Chlorooctane		106					70 - 130		
o-Terphenyl		104					70 - 130		

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-1574/1-A
Matrix: Solid
Analysis Batch: 1689

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/13/21 04:23	1

Lab Sample ID: LCS 880-1574/3-A
Matrix: Solid
Analysis Batch: 1689

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	246.7		mg/Kg		99	90 - 110

Lab Sample ID: LCSD 880-1574/2-A
Matrix: Solid
Analysis Batch: 1689

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	246.9		mg/Kg		99	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-505-1
SDG: Eddy

GC VOA

Prep Batch: 1480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-505-1	LDP01-SW	Total/NA	Solid	5035	
890-505-3	LDP01 B-SW	Total/NA	Solid	5035	
890-505-4	LDP02-SW	Total/NA	Solid	5035	
890-505-6	LD02 B-SW	Total/NA	Solid	5035	
MB 880-1480/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-1480/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-1480/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 1527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-505-1	LDP01-SW	Total/NA	Solid	8021B	1480
890-505-3	LDP01 B-SW	Total/NA	Solid	8021B	1480
890-505-4	LDP02-SW	Total/NA	Solid	8021B	1480
890-505-6	LD02 B-SW	Total/NA	Solid	8021B	1480
MB 880-1480/5-A	Method Blank	Total/NA	Solid	8021B	1480
MB 880-1527/8	Method Blank	Total/NA	Solid	8021B	
LCS 880-1480/1-A	Lab Control Sample	Total/NA	Solid	8021B	1480
LCSD 880-1480/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	1480

Analysis Batch: 1638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-505-7	LD03-SW	Total/NA	Solid	8021B	1681
890-505-9	LD03 B-SW	Total/NA	Solid	8021B	1681
MB 880-1681/5-A	Method Blank	Total/NA	Solid	8021B	1681
LCS 880-1681/1-A	Lab Control Sample	Total/NA	Solid	8021B	1681
LCSD 880-1681/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	1681

Prep Batch: 1681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-505-7	LD03-SW	Total/NA	Solid	5035	
890-505-9	LD03 B-SW	Total/NA	Solid	5035	
MB 880-1681/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-1681/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-1681/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 1499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-505-1	LDP01-SW	Total/NA	Solid	8015B NM	1546
890-505-3	LDP01 B-SW	Total/NA	Solid	8015B NM	1546
890-505-4	LDP02-SW	Total/NA	Solid	8015B NM	1546
890-505-6	LD02 B-SW	Total/NA	Solid	8015B NM	1546
890-505-7	LD03-SW	Total/NA	Solid	8015B NM	1546
890-505-9	LD03 B-SW	Total/NA	Solid	8015B NM	1546
MB 880-1546/1-A	Method Blank	Total/NA	Solid	8015B NM	1546
LCS 880-1546/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	1546
LCSD 880-1546/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	1546

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-505-1
SDG: Eddy

GC Semi VOA

Prep Batch: 1546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-505-1	LDP01-SW	Total/NA	Solid	8015NM Prep	
890-505-3	LDP01 B-SW	Total/NA	Solid	8015NM Prep	
890-505-4	LDP02-SW	Total/NA	Solid	8015NM Prep	
890-505-6	LD02 B-SW	Total/NA	Solid	8015NM Prep	
890-505-7	LD03-SW	Total/NA	Solid	8015NM Prep	
890-505-9	LD03 B-SW	Total/NA	Solid	8015NM Prep	
MB 880-1546/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-1546/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-1546/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 1574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-505-1	LDP01-SW	Soluble	Solid	DI Leach	
890-505-3	LDP01 B-SW	Soluble	Solid	DI Leach	
890-505-4	LDP02-SW	Soluble	Solid	DI Leach	
890-505-6	LD02 B-SW	Soluble	Solid	DI Leach	
890-505-7	LD03-SW	Soluble	Solid	DI Leach	
890-505-9	LD03 B-SW	Soluble	Solid	DI Leach	
MB 880-1574/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-1574/3-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-1574/2-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 1689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-505-1	LDP01-SW	Soluble	Solid	300.0	1574
890-505-3	LDP01 B-SW	Soluble	Solid	300.0	1574
890-505-4	LDP02-SW	Soluble	Solid	300.0	1574
890-505-6	LD02 B-SW	Soluble	Solid	300.0	1574
890-505-7	LD03-SW	Soluble	Solid	300.0	1574
890-505-9	LD03 B-SW	Soluble	Solid	300.0	1574
MB 880-1574/1-A	Method Blank	Soluble	Solid	300.0	1574
LCS 880-1574/3-A	Lab Control Sample	Soluble	Solid	300.0	1574
LCSD 880-1574/2-A	Lab Control Sample Dup	Soluble	Solid	300.0	1574

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-505-1
SDG: Eddy

Client Sample ID: LDP01-SW

Lab Sample ID: 890-505-1

Date Collected: 04/07/21 09:50

Matrix: Solid

Date Received: 04/08/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1480	04/08/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	1527	04/09/21 08:20	AJ	XM
Total/NA	Prep	8015NM Prep			1546	04/08/21 15:43	DM	XM
Total/NA	Analysis	8015B NM		1	1499	04/09/21 01:30	AJ	XM
Soluble	Leach	DI Leach			1574	04/09/21 11:44	CH	XM
Soluble	Analysis	300.0		1	1689	04/13/21 10:16	CH	XM

Client Sample ID: LDP01 B-SW

Lab Sample ID: 890-505-3

Date Collected: 04/07/21 11:00

Matrix: Solid

Date Received: 04/08/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1480	04/08/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	1527	04/09/21 08:40	AJ	XM
Total/NA	Prep	8015NM Prep			1546	04/08/21 15:43	DM	XM
Total/NA	Analysis	8015B NM		1	1499	04/09/21 01:51	AJ	XM
Soluble	Leach	DI Leach			1574	04/09/21 11:44	CH	XM
Soluble	Analysis	300.0		1	1689	04/13/21 10:27	CH	XM

Client Sample ID: LDP02-SW

Lab Sample ID: 890-505-4

Date Collected: 04/07/21 12:50

Matrix: Solid

Date Received: 04/08/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1480	04/08/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	1527	04/09/21 09:01	AJ	XM
Total/NA	Prep	8015NM Prep			1546	04/08/21 15:43	DM	XM
Total/NA	Analysis	8015B NM		1	1499	04/09/21 02:11	AJ	XM
Soluble	Leach	DI Leach			1574	04/09/21 11:44	CH	XM
Soluble	Analysis	300.0		10	1689	04/13/21 06:42	CH	XM

Client Sample ID: LD02 B-SW

Lab Sample ID: 890-505-6

Date Collected: 04/07/21 13:05

Matrix: Solid

Date Received: 04/08/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1480	04/08/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	1527	04/09/21 09:21	AJ	XM
Total/NA	Prep	8015NM Prep			1546	04/08/21 15:43	DM	XM
Total/NA	Analysis	8015B NM		1	1499	04/09/21 02:32	AJ	XM
Soluble	Leach	DI Leach			1574	04/09/21 11:44	CH	XM
Soluble	Analysis	300.0		1	1689	04/13/21 10:33	CH	XM

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-505-1
SDG: Eddy

Client Sample ID: LD03-SW

Lab Sample ID: 890-505-7

Date Collected: 04/07/21 13:37

Matrix: Solid

Date Received: 04/08/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1681	04/12/21 16:18	MR	XM
Total/NA	Analysis	8021B		1	1638	04/13/21 02:12	MR	XM
Total/NA	Prep	8015NM Prep			1546	04/08/21 15:43	DM	XM
Total/NA	Analysis	8015B NM		1	1499	04/09/21 02:53	AJ	XM
Soluble	Leach	DI Leach			1574	04/09/21 11:44	CH	XM
Soluble	Analysis	300.0		20	1689	04/13/21 06:53	CH	XM

Client Sample ID: LD03 B-SW

Lab Sample ID: 890-505-9

Date Collected: 04/07/21 13:52

Matrix: Solid

Date Received: 04/08/21 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1681	04/12/21 16:18	MR	XM
Total/NA	Analysis	8021B		1	1638	04/13/21 02:37	MR	XM
Total/NA	Prep	8015NM Prep			1546	04/08/21 15:43	DM	XM
Total/NA	Analysis	8015B NM		1	1499	04/09/21 03:15	AJ	XM
Soluble	Leach	DI Leach			1574	04/09/21 11:44	CH	XM
Soluble	Analysis	300.0		1	1689	04/13/21 10:38	CH	XM

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-505-1
SDG: Eddy

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-505-1
SDG: Eddy

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-505-1
SDG: Eddy

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-505-1	LDP01-SW	Solid	04/07/21 09:50	04/08/21 10:00	- 5
890-505-3	LDP01 B-SW	Solid	04/07/21 11:00	04/08/21 10:00	- 13
890-505-4	LDP02-SW	Solid	04/07/21 12:50	04/08/21 10:00	- 5
890-505-6	LD02 B-SW	Solid	04/07/21 13:05	04/08/21 10:00	- 13
890-505-7	LD03-SW	Solid	04/07/21 13:37	04/08/21 10:00	- 5
890-505-9	LD03 B-SW	Solid	04/07/21 13:52	04/08/21 10:00	- 13

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Chain of Custody

Work Order No: _____



Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432-704-5440) El Paso, TX (915)565-3443 Lubbock, TX (806)794-1296
Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

www.xenco.com

Page _____ of _____

Project Manager: Dan Moir	Bill to: (if different) Kyle Littrell
Company Name: WSP USA Inc., Permian office	Company Name: XTO Energy
Address: 3300 North A Street	Address:
City, State, ZIP: Midland, Tx 79705	City, State, ZIP:
Phone: (432) 236-3849	Email: will.mather@wsp.com, dan_moir@wsp.com

Program: US7/PST <input type="checkbox"/> RP <input type="checkbox"/> Crownfields <input type="checkbox"/> RC <input type="checkbox"/> perfund <input type="checkbox"/>
State of Project: Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> ST/UST <input type="checkbox"/> RP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables: EDD <input type="checkbox"/> ADaPT <input type="checkbox"/> Other: _____

Project Name:	Turn Around	ANALYSIS REQUEST				Work Order Notes
		TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	890-505 Chain of Custody	
Project Name: JRU D11	Routine	1	X	X	AFE EW:2021.01559.EXP.01	
Project Number: TE012919259	Rush: 24 HR	1	X	X	Cost center 1082151001	
P.O. Number: Eddy	Due Date: 4/9/21	1	X	X		
Sampler's Name: William Mather		1	X	X		
SAMPLE RECEIPT	Temp Blank <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Wet Ice <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Thermometer ID			
Temperature (°C): 1.2 / 1.0	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Correction Factor: -0.2				
Received Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Total Containers:				
Cooler Custody Seals: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Sample Custody Seals: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Sample Comments	
LDP01-SW	S	4/7/2021	9:50	5'	Discrete	
LDP01A-SW	S	4/7/2021	10:39	10'	Discrete	
LDP01B-SW	S	4/7/2021	11:00	13'	Discrete	
LDP02-SW	S	4/7/2021	12:50	5'	Discrete	
LDP02A-SW	S	4/7/2021	12:58	10'	Discrete	
LDP02B-SW	S	4/7/2021	13:05	13'	Discrete	
LDP03-SW	S	4/7/2021	13:37	5'	Discrete	
LDP03A-SW	S	4/7/2021	13:45	10'	Discrete	
LDP03B-SW	S	4/7/2021	13:52	13'	Discrete	

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	04/08/21 2	<i>[Signature]</i>	<i>[Signature]</i>	4.8.21 1000
		4			
		6			

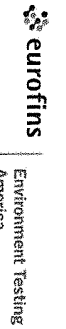


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Eurofins Xenco, Carlsbad

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

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler	Lab PM	Carrier Tracking No(s)	COC No:				
Client Contact:	Phone		Kramer, Jessica		890-155-1				
Shipping/Receiving	E-Mail		jessica.kramer@eurofinsnet.com		Page 1 of 1				
Company	Accreditations Required (See note)		NELAP - Louisiana NELAP - Texas		Job #:				
Eurofins Xenco					890-505-1				
Address:	Due Date Requested				Preservation Codes				
1211 W. Florida Ave	4/9/2021				A HCL M Hexene B NaOH N None C Zn Acetate O AsnAc2 D Nitric Acid P Na2OAS E NaHSO4 Q Na2SO3 F MeOH R -Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH-4.5 L EDA Z -other (specify) Other:				
City: Midland	TAT Requested (days)								
State, Zip: TX, 79701									
Phone: 432-704-5440 (Tel)	PO #:								
Email:	W/C #:								
Project Name: JRU D11	Project #:								
Site:	SSOV#:								
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=Oxide, B=Bitume, A=As)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of containers	Special Instructions/Note:
LDP01-SW (890-505-1)	4/7/21	09:50	Mountain	Solid	X	X	8015MOD_NM/8015NM_S_Prep Full TPH	1	
LDP01-A-SW (890-505-2)	4/7/21	10:39	Mountain	Solid	X	X	300_ORGFM_28D/DI_LEACH Chloride	1	
LDP01-B-SW (890-505-3)	4/7/21	11:00	Mountain	Solid	X	X	8021B/5035FP_Calc BTEX	1	
LDP02-SW (890-505-4)	4/7/21	12:50	Mountain	Solid	X	X		1	
LDP02-A-SW (890-505-5)	4/7/21	12:58	Mountain	Solid	X	X		1	
LD02-B-SW (890-505-6)	4/7/21	13:05	Mountain	Solid	X	X		1	
LD03-SW (890-505-7)	4/7/21	13:37	Mountain	Solid	X	X		1	
LD03-A-SW (890-505-8)	4/7/21	13:45	Mountain	Solid	X	X		1	
LD03-B-SW (890-505-9)	4/7/21	13:52	Mountain	Solid	X	X		1	
<p>Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon our subcontracted laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.</p>									
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
Unconfirmed					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested I II III IV, Other (Specify)					Special Instructions/QC Requirements				
Primary Deliverable Rank 2									
Empty Kit Relinquished by		Date	Time	Method of Shipment:					
Relinquished by: <i>Coe Gipp</i>		Date/Time:		Received by:		Date/Time:			
Relinquished by:		Date/Time:		Received by:		Date/Time:			
Relinquished by:		Date/Time:		Received by:		Date/Time:			
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.		Cooler Temperature(s) °C and Other Remarks:					

Eurofins Xenco, Carlsbad

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

Chain of Custody Record



Environment Testing
America

Client Information (Sub Contract Lab)

Client Contact:
Shipping/Receiving:
Company: Eurofins Xenco

Lab PM: Kramer, Jessica
E-Mail: jessica.kramer@eurofinsnet.com

Accreditations Required (See note)
NELAP - Louisiana NELAP - Texas

Carrier Tracking No(s):
State of Origin: New Mexico

Page: 1 of 1
Job #: 890-505-1

COC No: 890-155-1

Address: 1211 W Florida Ave
City: Midland
State Zip: TX 79701

Due Date Requested: 4/9/2021
FAT Requested (days):

Phone: 432-704-5440(Tel)
Email:
Project Name: JRU DI1
Site: S50W#

Project #: 89000004
W/O #:

Analysis Requested

Preservation Codes

Other:
A. HCL
B. NaOH
C. Zn Acetate
D. Nitric Acid
E. NaHSO4
F. MeOH
G. Amchlor
H. Ascorbic Acid
I. Ice
J. DI Water
K. EDTA
L. EDTA
M. Hexane
N. None
O. AshNaO2
P. Na2O4S
Q. Na2SO3
R. Na2S2O3
S. H2SO4
T. TSP Dodecahydrate
U. Acetone
V. MCAA
W. pH 4.5
Z. other (Specify)

Sample Identification - Client ID (Lab ID)

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Soil, O=Other)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8016MOD_NM/8016NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note
LDP01-SW (890-505-1)	4/7/21	09:50	Mountain	Solid		X	X	X	X	X	1	
LDP01 A-SW (890-505-2)	4/7/21	10:39	Mountain	Solid		X	X	X	X	X	1	
LDP01 B-SW (890-505-3)	4/7/21	11:00	Mountain	Solid		X	X	X	X	X	1	
LDP02-SW (890-505-4)	4/7/21	12:50	Mountain	Solid		X	X	X	X	X	1	
LDP02 A-SW (890-505-5)	4/7/21	12:58	Mountain	Solid		X	X	X	X	X	1	
LD02 B-SW (890-505-6)	4/7/21	13:05	Mountain	Solid		X	X	X	X	X	1	
LD03-SW (890-505-7)	4/7/21	13:37	Mountain	Solid		X	X	X	X	X	1	
LD03 A-SW (890-505-8)	4/7/21	13:45	Mountain	Solid		X	X	X	X	X	1	
LD03 B-SW (890-505-9)	4/7/21	13:52	Mountain	Solid		X	X	X	X	X	1	

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

Possible Hazard Identification

Unconfirmed
Deliverable Requested I, II, III, IV Other (Specify) Primary Deliverable Rank 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Return To Client Disposal By Lab Archive For Months

Empty Kit Relinquished by

Date/Time	Company	Date/Time	Company
Relinquished by: Joe Gipp 4.8.21	Company	Received by: [Signature]	Company
Relinquished by:	Company	Received by:	Company

Relinquished by

Date/Time	Company	Date/Time	Company
Relinquished by: Joe Gipp 4.8.21	Company	Received by: [Signature]	Company
Relinquished by:	Company	Received by:	Company

Custody Seals Intact

Δ Yes Δ No Custody Seal No Cooler Temperature(s) °C and Other Remarks.

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-505-1

SDG Number: Eddy

Login Number: 505

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-505-1

SDG Number: Eddy

Login Number: 505

List Number: 2

Creator: Copeland, Tatiana

List Source: Eurofins Midland

List Creation: 04/08/21 03:36 PM

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

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-510-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU D11

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

Attn: Dan Moir

Authorized for release by:
4/12/2021 9:00:10 PM

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



LINKS

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

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

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Client: WSP USA Inc.
Project/Site: JRU DI1

Laboratory Job ID: 890-510-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU D11

Job ID: 890-510-1
SDG: TE012919259

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-510-1
SDG: TE012919259

Job ID: 890-510-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-510-1

Receipt

The samples were received on 4/9/2021 11:36 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 5.8°C

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: LDP02-NE (890-510-1), LDP02A-NE (890-510-2), LDP02B-NE (890-510-3), LDP02C-NE (890-510-4), LDP02D-NE (890-510-5), LDP03-NE (890-510-6), LDP03A-NE (890-510-7) and LDP03B-NE (890-510-8).

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.

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Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-510-1
SDG: TE012919259

Client Sample ID: LDP02-NE

Lab Sample ID: 890-510-1

Date Collected: 04/08/21 08:35

Matrix: Solid

Date Received: 04/09/21 11:36

Sample Depth: - 5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:00	04/12/21 13:33	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:00	04/12/21 13:33	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:00	04/12/21 13:33	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/12/21 09:00	04/12/21 13:33	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:00	04/12/21 13:33	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/12/21 09:00	04/12/21 13:33	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/12/21 09:00	04/12/21 13:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	04/12/21 09:00	04/12/21 13:33	1
1,4-Difluorobenzene (Surr)	108		70 - 130	04/12/21 09:00	04/12/21 13:33	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	49.9	mg/Kg		04/12/21 11:06	04/12/21 13:32	1
Diesel Range Organics (Over C10-C28)	<49.9	U F1	49.9	mg/Kg		04/12/21 11:06	04/12/21 13:32	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/12/21 11:06	04/12/21 13:32	1
Total TPH	<49.9	U F1	49.9	mg/Kg		04/12/21 11:06	04/12/21 13:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	116		70 - 130	04/12/21 11:06	04/12/21 13:32	1
o-Terphenyl	128		70 - 130	04/12/21 11:06	04/12/21 13:32	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	397		4.95	mg/Kg			04/12/21 17:28	1

Client Sample ID: LDP02A-NE

Lab Sample ID: 890-510-2

Date Collected: 04/08/21 08:42

Matrix: Solid

Date Received: 04/09/21 11:36

Sample Depth: - 10

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:00	04/12/21 13:54	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:00	04/12/21 13:54	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:00	04/12/21 13:54	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/12/21 09:00	04/12/21 13:54	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:00	04/12/21 13:54	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/12/21 09:00	04/12/21 13:54	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/12/21 09:00	04/12/21 13:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	04/12/21 09:00	04/12/21 13:54	1
1,4-Difluorobenzene (Surr)	108		70 - 130	04/12/21 09:00	04/12/21 13:54	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU D11Job ID: 890-510-1
SDG: TE012919259

Client Sample ID: LDP02A-NE

Lab Sample ID: 890-510-2

Date Collected: 04/08/21 08:42

Matrix: Solid

Date Received: 04/09/21 11:36

Sample Depth: - 10

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/12/21 11:06	04/12/21 14:36	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/12/21 11:06	04/12/21 14:36	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/12/21 11:06	04/12/21 14:36	1
Total TPH	<49.9	U	49.9	mg/Kg		04/12/21 11:06	04/12/21 14:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130	04/12/21 11:06	04/12/21 14:36	1
o-Terphenyl	128		70 - 130	04/12/21 11:06	04/12/21 14:36	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	731		49.5	mg/Kg			04/12/21 16:01	10

Client Sample ID: LDP02B-NE

Lab Sample ID: 890-510-3

Date Collected: 04/08/21 08:47

Matrix: Solid

Date Received: 04/09/21 11:36

Sample Depth: - 15

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/12/21 09:00	04/12/21 14:14	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/12/21 09:00	04/12/21 14:14	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/12/21 09:00	04/12/21 14:14	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/12/21 09:00	04/12/21 14:14	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/12/21 09:00	04/12/21 14:14	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/12/21 09:00	04/12/21 14:14	1
Total BTEX	<0.00199	U	0.00199	mg/Kg		04/12/21 09:00	04/12/21 14:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	04/12/21 09:00	04/12/21 14:14	1
1,4-Difluorobenzene (Surr)	107		70 - 130	04/12/21 09:00	04/12/21 14:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		04/12/21 11:06	04/12/21 14:57	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		04/12/21 11:06	04/12/21 14:57	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		04/12/21 11:06	04/12/21 14:57	1
Total TPH	<49.8	U	49.8	mg/Kg		04/12/21 11:06	04/12/21 14:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	04/12/21 11:06	04/12/21 14:57	1
o-Terphenyl	114		70 - 130	04/12/21 11:06	04/12/21 14:57	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1580		49.8	mg/Kg			04/12/21 16:07	10

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-510-1
SDG: TE012919259

Client Sample ID: LDP02C-NE

Lab Sample ID: 890-510-4

Date Collected: 04/08/21 09:10

Matrix: Solid

Date Received: 04/09/21 11:36

Sample Depth: - 20

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/12/21 09:00	04/12/21 14:34	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/12/21 09:00	04/12/21 14:34	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/12/21 09:00	04/12/21 14:34	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/12/21 09:00	04/12/21 14:34	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/12/21 09:00	04/12/21 14:34	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/12/21 09:00	04/12/21 14:34	1
Total BTEX	<0.00199	U	0.00199	mg/Kg		04/12/21 09:00	04/12/21 14:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	04/12/21 09:00	04/12/21 14:34	1
1,4-Difluorobenzene (Surr)	108		70 - 130	04/12/21 09:00	04/12/21 14:34	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/12/21 11:06	04/12/21 15:18	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/12/21 11:06	04/12/21 15:18	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/12/21 11:06	04/12/21 15:18	1
Total TPH	<49.9	U	49.9	mg/Kg		04/12/21 11:06	04/12/21 15:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130	04/12/21 11:06	04/12/21 15:18	1
o-Terphenyl	125		70 - 130	04/12/21 11:06	04/12/21 15:18	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	73.3		4.97	mg/Kg			04/12/21 17:34	1

Client Sample ID: LDP02D-NE

Lab Sample ID: 890-510-5

Date Collected: 04/08/21 10:33

Matrix: Solid

Date Received: 04/09/21 11:36

Sample Depth: - 24

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 13:29	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 13:29	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 13:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/12/21 09:50	04/12/21 13:29	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 13:29	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/12/21 09:50	04/12/21 13:29	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 13:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130	04/12/21 09:50	04/12/21 13:29	1
1,4-Difluorobenzene (Surr)	104		70 - 130	04/12/21 09:50	04/12/21 13:29	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU D11Job ID: 890-510-1
SDG: TE012919259

Client Sample ID: LDP02D-NE

Lab Sample ID: 890-510-5

Date Collected: 04/08/21 10:33

Matrix: Solid

Date Received: 04/09/21 11:36

Sample Depth: - 24

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/12/21 11:06	04/12/21 15:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/12/21 11:06	04/12/21 15:39	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/12/21 11:06	04/12/21 15:39	1
Total TPH	<50.0	U	50.0	mg/Kg		04/12/21 11:06	04/12/21 15:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130	04/12/21 11:06	04/12/21 15:39	1
o-Terphenyl	123		70 - 130	04/12/21 11:06	04/12/21 15:39	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	97.9		5.00	mg/Kg			04/12/21 17:39	1

Client Sample ID: LDP03-NE

Lab Sample ID: 890-510-6

Date Collected: 04/08/21 11:14

Matrix: Solid

Date Received: 04/09/21 11:36

Sample Depth: - 5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/12/21 09:50	04/12/21 13:50	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/12/21 09:50	04/12/21 13:50	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/12/21 09:50	04/12/21 13:50	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/12/21 09:50	04/12/21 13:50	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/12/21 09:50	04/12/21 13:50	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/12/21 09:50	04/12/21 13:50	1
Total BTEX	<0.00199	U	0.00199	mg/Kg		04/12/21 09:50	04/12/21 13:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	04/12/21 09:50	04/12/21 13:50	1
1,4-Difluorobenzene (Surr)	117		70 - 130	04/12/21 09:50	04/12/21 13:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1	mg/Kg		04/12/21 11:06	04/12/21 16:00	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1	mg/Kg		04/12/21 11:06	04/12/21 16:00	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		04/12/21 11:06	04/12/21 16:00	1
Total TPH	<50.1	U	50.1	mg/Kg		04/12/21 11:06	04/12/21 16:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130	04/12/21 11:06	04/12/21 16:00	1
o-Terphenyl	115		70 - 130	04/12/21 11:06	04/12/21 16:00	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	233		5.00	mg/Kg			04/12/21 17:45	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-510-1
SDG: TE012919259

Client Sample ID: LDP03A-NE

Lab Sample ID: 890-510-7

Date Collected: 04/08/21 11:32

Matrix: Solid

Date Received: 04/09/21 11:36

Sample Depth: - 10

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 14:11	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 14:11	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 14:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/12/21 09:50	04/12/21 14:11	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 14:11	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/12/21 09:50	04/12/21 14:11	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 14:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	04/12/21 09:50	04/12/21 14:11	1
1,4-Difluorobenzene (Surr)	110		70 - 130	04/12/21 09:50	04/12/21 14:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/12/21 11:06	04/12/21 16:21	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/12/21 11:06	04/12/21 16:21	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/12/21 11:06	04/12/21 16:21	1
Total TPH	<49.9	U	49.9	mg/Kg		04/12/21 11:06	04/12/21 16:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130	04/12/21 11:06	04/12/21 16:21	1
o-Terphenyl	114		70 - 130	04/12/21 11:06	04/12/21 16:21	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	62.3		5.00	mg/Kg			04/12/21 17:50	1

Client Sample ID: LDP03B-NE

Lab Sample ID: 890-510-8

Date Collected: 04/08/21 12:14

Matrix: Solid

Date Received: 04/09/21 11:36

Sample Depth: - 15

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 14:31	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 14:31	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 14:31	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/12/21 09:50	04/12/21 14:31	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 14:31	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/12/21 09:50	04/12/21 14:31	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 14:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	04/12/21 09:50	04/12/21 14:31	1
1,4-Difluorobenzene (Surr)	112		70 - 130	04/12/21 09:50	04/12/21 14:31	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-510-1
SDG: TE012919259

Client Sample ID: LDP03B-NE

Lab Sample ID: 890-510-8

Date Collected: 04/08/21 12:14

Matrix: Solid

Date Received: 04/09/21 11:36

Sample Depth: - 15

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg	-	04/12/21 11:06	04/12/21 16:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg	-	04/12/21 11:06	04/12/21 16:43	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg	-	04/12/21 11:06	04/12/21 16:43	1
Total TPH	<49.9	U	49.9	mg/Kg	-	04/12/21 11:06	04/12/21 16:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	04/12/21 11:06	04/12/21 16:43	1
o-Terphenyl	122		70 - 130	04/12/21 11:06	04/12/21 16:43	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	66.0		4.99	mg/Kg	-		04/12/21 17:56	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-510-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-510-1	LDP02-NE	102	108
890-510-1 MS	LDP02-NE	100	107
890-510-1 MSD	LDP02-NE	104	104
890-510-2	LDP02A-NE	106	108
890-510-3	LDP02B-NE	109	107
890-510-4	LDP02C-NE	107	108
890-510-5	LDP02D-NE	86	104
890-510-5 MS	LDP02D-NE	85	107
890-510-5 MSD	LDP02D-NE	92	111
890-510-6	LDP03-NE	97	117
890-510-7	LDP03A-NE	95	110
890-510-8	LDP03B-NE	92	112
LCS 880-1644/1-A	Lab Control Sample	100	105
LCS 880-1646/1-A	Lab Control Sample	89	120
LCSD 880-1644/2-A	Lab Control Sample Dup	101	104
LCSD 880-1646/2-A	Lab Control Sample Dup	90	110
MB 880-1641/7	Method Blank	99	102
MB 880-1646/5-A	Method Blank	111	103

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

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-510-1	LDP02-NE	116	128
890-510-1 MS	LDP02-NE	115	114
890-510-1 MSD	LDP02-NE	113	112
890-510-2	LDP02A-NE	112	128
890-510-3	LDP02B-NE	106	114
890-510-4	LDP02C-NE	109	125
890-510-5	LDP02D-NE	109	123
890-510-6	LDP03-NE	104	115
890-510-7	LDP03A-NE	104	114
890-510-8	LDP03B-NE	107	122
LCS 880-1660/2-A	Lab Control Sample	114	112
LCSD 880-1660/3-A	Lab Control Sample Dup	110	107
MB 880-1660/1-A	Method Blank	104	118

Surrogate Legend
1CO = 1-Chlorooctane
OTPH = o-Terphenyl

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-510-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-1641/7
Matrix: Solid
Analysis Batch: 1641

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg			04/12/21 13:04	1
Toluene	<0.00200	U	0.00200	mg/Kg			04/12/21 13:04	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg			04/12/21 13:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg			04/12/21 13:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg			04/12/21 13:04	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg			04/12/21 13:04	1
Total BTEX	<0.00200	U	0.00200	mg/Kg			04/12/21 13:04	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	99		70 - 130		04/12/21 13:04	1
1,4-Difluorobenzene (Surr)	102		70 - 130		04/12/21 13:04	1

Lab Sample ID: LCS 880-1644/1-A
Matrix: Solid
Analysis Batch: 1641

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1644

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Benzene	0.100	0.09645		mg/Kg		96	70 - 130
Toluene	0.100	0.1011		mg/Kg		101	70 - 130
Ethylbenzene	0.100	0.1048		mg/Kg		105	70 - 130
m-Xylene & p-Xylene	0.200	0.2133		mg/Kg		107	70 - 130
o-Xylene	0.100	0.1025		mg/Kg		103	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: LCSD 880-1644/2-A
Matrix: Solid
Analysis Batch: 1641

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1644

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec. Limits	RPD	
		Result	Qualifier					RPD	Limit
Benzene	0.100	0.09553		mg/Kg		96	70 - 130	1	35
Toluene	0.100	0.1010		mg/Kg		101	70 - 130	0	35
Ethylbenzene	0.100	0.1043		mg/Kg		104	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.2138		mg/Kg		107	70 - 130	0	35
o-Xylene	0.100	0.1034		mg/Kg		103	70 - 130	1	35

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: 890-510-1 MS
Matrix: Solid
Analysis Batch: 1641

Client Sample ID: LDP02-NE
Prep Type: Total/NA
Prep Batch: 1644

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
Benzene	<0.00200	U	0.0994	0.09273		mg/Kg		93	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU D11

Job ID: 890-510-1
SDG: TE012919259

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

Lab Sample ID: 890-510-1 MS

Client Sample ID: LDP02-NE

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 1641

Prep Batch: 1644

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	<0.00200	U	0.0994	0.09948		mg/Kg		100	70 - 130
Ethylbenzene	<0.00200	U	0.0994	0.1045		mg/Kg		105	70 - 130
m-Xylene & p-Xylene	<0.00400	U	0.199	0.2143		mg/Kg		108	70 - 130
o-Xylene	<0.00200	U	0.0994	0.1021		mg/Kg		103	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: 890-510-1 MSD

Client Sample ID: LDP02-NE

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 1641

Prep Batch: 1644

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.07373		mg/Kg		74	70 - 130	23	35
Toluene	<0.00200	U	0.0996	0.08593		mg/Kg		86	70 - 130	15	35
Ethylbenzene	<0.00200	U	0.0996	0.09444		mg/Kg		95	70 - 130	10	35
m-Xylene & p-Xylene	<0.00400	U	0.199	0.1940		mg/Kg		97	70 - 130	10	35
o-Xylene	<0.00200	U	0.0996	0.09525		mg/Kg		96	70 - 130	7	35

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

Lab Sample ID: MB 880-1646/5-A

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 1642

Prep Batch: 1646

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 13:07	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 13:07	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 13:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/12/21 09:50	04/12/21 13:07	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 13:07	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/12/21 09:50	04/12/21 13:07	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/12/21 09:50	04/12/21 13:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	04/12/21 09:50	04/12/21 13:07	1
1,4-Difluorobenzene (Surr)	103		70 - 130	04/12/21 09:50	04/12/21 13:07	1

Lab Sample ID: LCS 880-1646/1-A

Client Sample ID: Lab Control Sample

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 1642

Prep Batch: 1646

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.1029		mg/Kg		103	70 - 130
Toluene	0.100	0.1115		mg/Kg		112	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU D11

Job ID: 890-510-1
SDG: TE012919259

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

Lab Sample ID: LCS 880-1646/1-A

Matrix: Solid

Analysis Batch: 1642

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 1646

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Ethylbenzene	0.100	0.09876		mg/Kg		99	70 - 130
m-Xylene & p-Xylene	0.200	0.2031		mg/Kg		102	70 - 130
o-Xylene	0.100	0.09699		mg/Kg		97	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	89		70 - 130
1,4-Difluorobenzene (Surr)	120		70 - 130

Lab Sample ID: LCSD 880-1646/2-A

Matrix: Solid

Analysis Batch: 1642

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 1646

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec. Limits	RPD	Limit
		Result	Qualifier						
Benzene	0.100	0.09682		mg/Kg		97	70 - 130	6	35
Toluene	0.100	0.1044		mg/Kg		104	70 - 130	7	35
Ethylbenzene	0.100	0.09723		mg/Kg		97	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1969		mg/Kg		98	70 - 130	3	35
o-Xylene	0.100	0.09536		mg/Kg		95	70 - 130	2	35

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

Lab Sample ID: 890-510-5 MS

Matrix: Solid

Analysis Batch: 1642

Client Sample ID: LDP02D-NE

Prep Type: Total/NA

Prep Batch: 1646

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
Benzene	<0.00200	U	0.101	0.09516		mg/Kg		93	70 - 130
Toluene	<0.00200	U	0.101	0.1000		mg/Kg		99	70 - 130
Ethylbenzene	<0.00200	U	0.101	0.09423		mg/Kg		93	70 - 130
m-Xylene & p-Xylene	<0.00400	U	0.202	0.1918		mg/Kg		95	70 - 130
o-Xylene	<0.00200	U	0.101	0.09115		mg/Kg		90	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	85		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: 890-510-5 MSD

Matrix: Solid

Analysis Batch: 1642

Client Sample ID: LDP02D-NE

Prep Type: Total/NA

Prep Batch: 1646

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Benzene	<0.00200	U	0.0998	0.08732		mg/Kg		86	70 - 130	9	35
Toluene	<0.00200	U	0.0998	0.09414		mg/Kg		94	70 - 130	6	35
Ethylbenzene	<0.00200	U	0.0998	0.08866		mg/Kg		89	70 - 130	6	35
m-Xylene & p-Xylene	<0.00400	U	0.200	0.1807		mg/Kg		91	70 - 130	6	35
o-Xylene	<0.00200	U	0.0998	0.08494		mg/Kg		85	70 - 130	7	35

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU D11

Job ID: 890-510-1
SDG: TE012919259

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

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	92		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

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

Lab Sample ID: MB 880-1660/1-A
Matrix: Solid
Analysis Batch: 1662

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1660

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/12/21 11:06	04/12/21 12:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/12/21 11:06	04/12/21 12:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/12/21 11:06	04/12/21 12:28	1
Total TPH	<50.0	U	50.0	mg/Kg		04/12/21 11:06	04/12/21 12:28	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1-Chlorooctane	104		70 - 130	04/12/21 11:06	04/12/21 12:28	1
o-Terphenyl	118		70 - 130	04/12/21 11:06	04/12/21 12:28	1

Lab Sample ID: LCS 880-1660/2-A
Matrix: Solid
Analysis Batch: 1662

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1660

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (Over C10-C28)	1000	1199		mg/Kg		120	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	114		70 - 130
o-Terphenyl	112		70 - 130

Lab Sample ID: LCSD 880-1660/3-A
Matrix: Solid
Analysis Batch: 1662

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1660

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Diesel Range Organics (Over C10-C28)	1000	1170		mg/Kg		117	70 - 130	2	20

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	110		70 - 130
o-Terphenyl	107		70 - 130

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU D11Job ID: 890-510-1
SDG: TE012919259

GC VOA

Analysis Batch: 1641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-510-1	LDP02-NE	Total/NA	Solid	8021B	1644
890-510-2	LDP02A-NE	Total/NA	Solid	8021B	1644
890-510-3	LDP02B-NE	Total/NA	Solid	8021B	1644
890-510-4	LDP02C-NE	Total/NA	Solid	8021B	1644
MB 880-1641/7	Method Blank	Total/NA	Solid	8021B	
LCS 880-1644/1-A	Lab Control Sample	Total/NA	Solid	8021B	1644
LCSD 880-1644/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	1644
890-510-1 MS	LDP02-NE	Total/NA	Solid	8021B	1644
890-510-1 MSD	LDP02-NE	Total/NA	Solid	8021B	1644

Analysis Batch: 1642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-510-5	LDP02D-NE	Total/NA	Solid	8021B	1646
890-510-6	LDP03-NE	Total/NA	Solid	8021B	1646
890-510-7	LDP03A-NE	Total/NA	Solid	8021B	1646
890-510-8	LDP03B-NE	Total/NA	Solid	8021B	1646
MB 880-1646/5-A	Method Blank	Total/NA	Solid	8021B	1646
LCS 880-1646/1-A	Lab Control Sample	Total/NA	Solid	8021B	1646
LCSD 880-1646/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	1646
890-510-5 MS	LDP02D-NE	Total/NA	Solid	8021B	1646
890-510-5 MSD	LDP02D-NE	Total/NA	Solid	8021B	1646

Prep Batch: 1644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-510-1	LDP02-NE	Total/NA	Solid	5035	
890-510-2	LDP02A-NE	Total/NA	Solid	5035	
890-510-3	LDP02B-NE	Total/NA	Solid	5035	
890-510-4	LDP02C-NE	Total/NA	Solid	5035	
LCS 880-1644/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-1644/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-510-1 MS	LDP02-NE	Total/NA	Solid	5035	
890-510-1 MSD	LDP02-NE	Total/NA	Solid	5035	

Prep Batch: 1646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-510-5	LDP02D-NE	Total/NA	Solid	5035	
890-510-6	LDP03-NE	Total/NA	Solid	5035	
890-510-7	LDP03A-NE	Total/NA	Solid	5035	
890-510-8	LDP03B-NE	Total/NA	Solid	5035	
MB 880-1646/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-1646/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-1646/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-510-5 MS	LDP02D-NE	Total/NA	Solid	5035	
890-510-5 MSD	LDP02D-NE	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 1660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-510-1	LDP02-NE	Total/NA	Solid	8015NM Prep	
890-510-2	LDP02A-NE	Total/NA	Solid	8015NM Prep	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-510-1
SDG: TE012919259

GC Semi VOA (Continued)

Prep Batch: 1660 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-510-3	LDP02B-NE	Total/NA	Solid	8015NM Prep	
890-510-4	LDP02C-NE	Total/NA	Solid	8015NM Prep	
890-510-5	LDP02D-NE	Total/NA	Solid	8015NM Prep	
890-510-6	LDP03-NE	Total/NA	Solid	8015NM Prep	
890-510-7	LDP03A-NE	Total/NA	Solid	8015NM Prep	
890-510-8	LDP03B-NE	Total/NA	Solid	8015NM Prep	
MB 880-1660/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-1660/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-1660/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-510-1 MS	LDP02-NE	Total/NA	Solid	8015NM Prep	
890-510-1 MSD	LDP02-NE	Total/NA	Solid	8015NM Prep	

Analysis Batch: 1662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-510-1	LDP02-NE	Total/NA	Solid	8015B NM	1660
890-510-2	LDP02A-NE	Total/NA	Solid	8015B NM	1660
890-510-3	LDP02B-NE	Total/NA	Solid	8015B NM	1660
890-510-4	LDP02C-NE	Total/NA	Solid	8015B NM	1660
890-510-5	LDP02D-NE	Total/NA	Solid	8015B NM	1660
890-510-6	LDP03-NE	Total/NA	Solid	8015B NM	1660
890-510-7	LDP03A-NE	Total/NA	Solid	8015B NM	1660
890-510-8	LDP03B-NE	Total/NA	Solid	8015B NM	1660
MB 880-1660/1-A	Method Blank	Total/NA	Solid	8015B NM	1660
LCS 880-1660/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	1660
LCSD 880-1660/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	1660
890-510-1 MS	LDP02-NE	Total/NA	Solid	8015B NM	1660
890-510-1 MSD	LDP02-NE	Total/NA	Solid	8015B NM	1660

HPLC/IC

Leach Batch: 1661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-510-1	LDP02-NE	Soluble	Solid	DI Leach	
890-510-2	LDP02A-NE	Soluble	Solid	DI Leach	
890-510-3	LDP02B-NE	Soluble	Solid	DI Leach	
890-510-4	LDP02C-NE	Soluble	Solid	DI Leach	
890-510-5	LDP02D-NE	Soluble	Solid	DI Leach	
890-510-6	LDP03-NE	Soluble	Solid	DI Leach	
890-510-7	LDP03A-NE	Soluble	Solid	DI Leach	
890-510-8	LDP03B-NE	Soluble	Solid	DI Leach	
MB 880-1661/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-1661/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-1661/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 1670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-510-1	LDP02-NE	Soluble	Solid	300.0	1661
890-510-2	LDP02A-NE	Soluble	Solid	300.0	1661
890-510-3	LDP02B-NE	Soluble	Solid	300.0	1661
890-510-4	LDP02C-NE	Soluble	Solid	300.0	1661
890-510-5	LDP02D-NE	Soluble	Solid	300.0	1661

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-510-1
SDG: TE012919259

HPLC/IC (Continued)

Analysis Batch: 1670 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-510-6	LDP03-NE	Soluble	Solid	300.0	1661
890-510-7	LDP03A-NE	Soluble	Solid	300.0	1661
890-510-8	LDP03B-NE	Soluble	Solid	300.0	1661
MB 880-1661/1-A	Method Blank	Soluble	Solid	300.0	1661
LCS 880-1661/2-A	Lab Control Sample	Soluble	Solid	300.0	1661
LCSD 880-1661/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	1661

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Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-510-1
SDG: TE012919259

Client Sample ID: LDP02-NE

Lab Sample ID: 890-510-1

Date Collected: 04/08/21 08:35

Matrix: Solid

Date Received: 04/09/21 11:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1644	04/12/21 09:00	KL	XM
Total/NA	Analysis	8021B		1	1641	04/12/21 13:33	KL	XM
Total/NA	Prep	8015NM Prep			1660	04/12/21 11:06	DM	XM
Total/NA	Analysis	8015B NM		1	1662	04/12/21 13:32	AJ	XM
Soluble	Leach	DI Leach			1661	04/12/21 11:07	SC	XM
Soluble	Analysis	300.0		1	1670	04/12/21 17:28	SC	XM

Client Sample ID: LDP02A-NE

Lab Sample ID: 890-510-2

Date Collected: 04/08/21 08:42

Matrix: Solid

Date Received: 04/09/21 11:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1644	04/12/21 09:00	KL	XM
Total/NA	Analysis	8021B		1	1641	04/12/21 13:54	KL	XM
Total/NA	Prep	8015NM Prep			1660	04/12/21 11:06	DM	XM
Total/NA	Analysis	8015B NM		1	1662	04/12/21 14:36	AJ	XM
Soluble	Leach	DI Leach			1661	04/12/21 11:07	SC	XM
Soluble	Analysis	300.0		10	1670	04/12/21 16:01	SC	XM

Client Sample ID: LDP02B-NE

Lab Sample ID: 890-510-3

Date Collected: 04/08/21 08:47

Matrix: Solid

Date Received: 04/09/21 11:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1644	04/12/21 09:00	KL	XM
Total/NA	Analysis	8021B		1	1641	04/12/21 14:14	KL	XM
Total/NA	Prep	8015NM Prep			1660	04/12/21 11:06	DM	XM
Total/NA	Analysis	8015B NM		1	1662	04/12/21 14:57	AJ	XM
Soluble	Leach	DI Leach			1661	04/12/21 11:07	SC	XM
Soluble	Analysis	300.0		10	1670	04/12/21 16:07	SC	XM

Client Sample ID: LDP02C-NE

Lab Sample ID: 890-510-4

Date Collected: 04/08/21 09:10

Matrix: Solid

Date Received: 04/09/21 11:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1644	04/12/21 09:00	KL	XM
Total/NA	Analysis	8021B		1	1641	04/12/21 14:34	KL	XM
Total/NA	Prep	8015NM Prep			1660	04/12/21 11:06	DM	XM
Total/NA	Analysis	8015B NM		1	1662	04/12/21 15:18	AJ	XM
Soluble	Leach	DI Leach			1661	04/12/21 11:07	SC	XM
Soluble	Analysis	300.0		1	1670	04/12/21 17:34	SC	XM

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-510-1
SDG: TE012919259

Client Sample ID: LDP02D-NE

Lab Sample ID: 890-510-5

Date Collected: 04/08/21 10:33

Matrix: Solid

Date Received: 04/09/21 11:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1646	04/12/21 09:50	KL	XM
Total/NA	Analysis	8021B		1	1642	04/12/21 13:29	KL	XM
Total/NA	Prep	8015NM Prep			1660	04/12/21 11:06	DM	XM
Total/NA	Analysis	8015B NM		1	1662	04/12/21 15:39	AJ	XM
Soluble	Leach	DI Leach			1661	04/12/21 11:07	SC	XM
Soluble	Analysis	300.0		1	1670	04/12/21 17:39	SC	XM

Client Sample ID: LDP03-NE

Lab Sample ID: 890-510-6

Date Collected: 04/08/21 11:14

Matrix: Solid

Date Received: 04/09/21 11:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1646	04/12/21 09:50	KL	XM
Total/NA	Analysis	8021B		1	1642	04/12/21 13:50	KL	XM
Total/NA	Prep	8015NM Prep			1660	04/12/21 11:06	DM	XM
Total/NA	Analysis	8015B NM		1	1662	04/12/21 16:00	AJ	XM
Soluble	Leach	DI Leach			1661	04/12/21 11:07	SC	XM
Soluble	Analysis	300.0		1	1670	04/12/21 17:45	SC	XM

Client Sample ID: LDP03A-NE

Lab Sample ID: 890-510-7

Date Collected: 04/08/21 11:32

Matrix: Solid

Date Received: 04/09/21 11:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1646	04/12/21 09:50	KL	XM
Total/NA	Analysis	8021B		1	1642	04/12/21 14:11	KL	XM
Total/NA	Prep	8015NM Prep			1660	04/12/21 11:06	DM	XM
Total/NA	Analysis	8015B NM		1	1662	04/12/21 16:21	AJ	XM
Soluble	Leach	DI Leach			1661	04/12/21 11:07	SC	XM
Soluble	Analysis	300.0		1	1670	04/12/21 17:50	SC	XM

Client Sample ID: LDP03B-NE

Lab Sample ID: 890-510-8

Date Collected: 04/08/21 12:14

Matrix: Solid

Date Received: 04/09/21 11:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1646	04/12/21 09:50	KL	XM
Total/NA	Analysis	8021B		1	1642	04/12/21 14:31	KL	XM
Total/NA	Prep	8015NM Prep			1660	04/12/21 11:06	DM	XM
Total/NA	Analysis	8015B NM		1	1662	04/12/21 16:43	AJ	XM
Soluble	Leach	DI Leach			1661	04/12/21 11:07	SC	XM
Soluble	Analysis	300.0		1	1670	04/12/21 17:56	SC	XM

Laboratory References:

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

Eurofins Xenco, Carlsbad

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-510-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-510-1
SDG: TE012919259

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-510-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-510-1	LDP02-NE	Solid	04/08/21 08:35	04/09/21 11:36	- 5
890-510-2	LDP02A-NE	Solid	04/08/21 08:42	04/09/21 11:36	- 10
890-510-3	LDP02B-NE	Solid	04/08/21 08:47	04/09/21 11:36	- 15
890-510-4	LDP02C-NE	Solid	04/08/21 09:10	04/09/21 11:36	- 20
890-510-5	LDP02D-NE	Solid	04/08/21 10:33	04/09/21 11:36	- 24
890-510-6	LDP03-NE	Solid	04/08/21 11:14	04/09/21 11:36	- 5
890-510-7	LDP03A-NE	Solid	04/08/21 11:32	04/09/21 11:36	- 10
890-510-8	LDP03B-NE	Solid	04/08/21 12:14	04/09/21 11:36	- 15

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

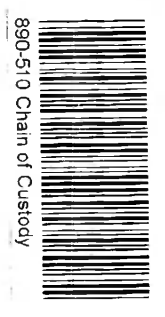
Chain of Custody

Work Order No: _____

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littell
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	Will.Mather@wsp.com, Dan.Moir@wsp.com

Program: USTR/ST	<input type="checkbox"/>	RP	<input type="checkbox"/>	rownfields	<input type="checkbox"/>	RC	<input type="checkbox"/>	epfund	<input type="checkbox"/>
State of Project:									
Reporting Level II	<input type="checkbox"/>	Level III	<input type="checkbox"/>	PT/UST	<input type="checkbox"/>	RP	<input type="checkbox"/>	Ivel IV	<input type="checkbox"/>
Deliverables: EDD	<input type="checkbox"/>	ADAPT	<input type="checkbox"/>	Other:					

Project Name:	SRU 011	Turn Around	
Project Number:	TE612919259	Routine	<input type="checkbox"/>
P.O. Number:	Eddy	Rush:	24hr
Sampler's Name:	Will Mather	Due Date:	4/14/21
SAMPLE RECEIPT	Temp Blank:	Yes/No	Yes/No
Temperature (°C):		Thermometer ID	
Received In tact:	Yes/No	Correction Factor:	2MM-007 10.0
Cooler Custody Seals:	Yes/No	Total Containers:	5.8
Sample Custody Seals:	Yes/No		



Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
LDP003 - NE	S	4/8/21	0835	5'	1	X	X	X		ATFE EW 2031. 61554 . EXR 01 rec 1082151000
LDP003A - NE	S	4/8/21	0842	10'	1	X	X	X		
LDP003B - NE	S	4/8/21	0847	15'	1	X	X	X		
LDP003C - NE	S	4/8/21	0910	20'	1	X	X	X		
LDP003D - NE	S	4/8/21	1033	24'	1	X	X	X		
LDP003 - NE	S	4/8/21	1114	5'	1	X	X	X		
LDP003A - NE	S	4/8/21	1132	16'	1	X	X	X		
LDP003B - NE	S	4/8/21	1214	15'	1	X	X	X		

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	4/9/21 / 1118	<i>[Signature]</i>	<i>[Signature]</i>	4/9/21 / 1136

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Eurofins Xenco, Carlsbad

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

Chain of Custody Record



Environment Testing
America

Client Information (Sub Contract Lab)

Client Contact: _____ Phone: _____ Lab PM: _____ Carrier/Tracking No(s): _____
 Shipping/Receiving: _____ E-Mail: Jessica Kramer@eurofins.com State of Origin: New Mexico
 Company: Eurofins Xenco _____ Accreditation Required (See note) NELAP - Louisiana NELAP - Texas
 Address: 1211 W Florida Ave _____
 City: Midland _____ TAT Requested (days) _____
 State, Zip: TX, 79701 _____ PO # _____
 Phone: 432-704-5440(Tel) _____ WO # _____
 Email: _____

Project Name: JRU D11 Project # 89000004
 Site: S50W# _____

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (G=Comp, G=grab)	Matrix (Water, Soil, Organic Soil, Br/Tissue, AAM)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of containers	Special Instructions/Note:
					Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride		
LDP02-NE (890-510-1)	4/8/21	08 35	Mountain	Solid	X	X	X	X	1	
LDP02A-NE (890-510-2)	4/8/21	08 42	Mountain	Solid	X	X	X	X	1	
LDP02B-NE (890-510-3)	4/8/21	08 47	Mountain	Solid	X	X	X	X	1	
LDP02C-NE (890-510-4)	4/8/21	09 10	Mountain	Solid	X	X	X	X	1	
LDP02D-NE (890-510-5)	4/8/21	10 33	Mountain	Solid	X	X	X	X	1	
LDP03-NE (890-510-6)	4/8/21	11 14	Mountain	Solid	X	X	X	X	1	
LDP03A-NE (890-510-7)	4/8/21	11 32	Mountain	Solid	X	X	X	X	1	
LDP03B-NE (890-510-8)	4/8/21	12 14	Mountain	Solid	X	X	X	X	1	

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

Possible Hazard Identification

Unconfirmed Deliverable Requested I II III, IV Other (Specify) _____ Primary Deliverable Rank: 2
 Empty Kit Relinquished by _____ Date _____
 Relinquished by: *Case Cafe* Date/Time: *4/9/21* Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements: _____
 Method of Shipment: _____
 Requested by: *William* Date/Time: *4/9/21 11:00 AM* Company: _____
 Received by: _____ Date/Time: _____ Company: _____

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-510-1
SDG Number: TE012919259

Login Number: 510
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-510-1
SDG Number: TE012919259

Login Number: 510
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 04/12/21 10:59 AM

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

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-513-1
Laboratory Sample Delivery Group: Eddy
Client Project/Site: JRU D11 TE012919259

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

Attn: Dan Moir

Authorized for release by:
4/14/2021 4:48:23 PM

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



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

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

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Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Laboratory Job ID: 890-513-1
SDG: Eddy

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU D11 TE012919259

Job ID: 890-513-1
SDG: Eddy

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-513-1
SDG: Eddy

Job ID: 890-513-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-513-1

Receipt

The samples were received on 4/13/2021 8:30 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 1.2°C

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: FS01 (890-513-1) and FS02 (890-513-2).

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.

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Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU D11 TE012919259

Job ID: 890-513-1
SDG: Eddy

Client Sample ID: FS01

Lab Sample ID: 890-513-1

Date Collected: 04/09/21 12:50

Matrix: Solid

Date Received: 04/13/21 08:30

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		04/13/21 11:49	04/13/21 23:07	1
Toluene	<0.00202	U	0.00202	mg/Kg		04/13/21 11:49	04/13/21 23:07	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		04/13/21 11:49	04/13/21 23:07	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		04/13/21 11:49	04/13/21 23:07	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		04/13/21 11:49	04/13/21 23:07	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		04/13/21 11:49	04/13/21 23:07	1
Total BTEX	<0.00202	U	0.00202	mg/Kg		04/13/21 11:49	04/13/21 23:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	04/13/21 11:49	04/13/21 23:07	1
1,4-Difluorobenzene (Surr)	99		70 - 130	04/13/21 11:49	04/13/21 23:07	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/13/21 13:44	04/13/21 23:08	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/13/21 13:44	04/13/21 23:08	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/13/21 13:44	04/13/21 23:08	1
Total TPH	<50.0	U	50.0	mg/Kg		04/13/21 13:44	04/13/21 23:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	04/13/21 13:44	04/13/21 23:08	1
o-Terphenyl	90		70 - 130	04/13/21 13:44	04/13/21 23:08	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	271		5.02	mg/Kg			04/13/21 22:44	1

Client Sample ID: FS02

Lab Sample ID: 890-513-2

Date Collected: 04/09/21 13:29

Matrix: Solid

Date Received: 04/13/21 08:30

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/13/21 11:49	04/13/21 23:27	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/13/21 11:49	04/13/21 23:27	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/13/21 11:49	04/13/21 23:27	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/13/21 11:49	04/13/21 23:27	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/13/21 11:49	04/13/21 23:27	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/13/21 11:49	04/13/21 23:27	1
Total BTEX	<0.00199	U	0.00199	mg/Kg		04/13/21 11:49	04/13/21 23:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130	04/13/21 11:49	04/13/21 23:27	1
1,4-Difluorobenzene (Surr)	104		70 - 130	04/13/21 11:49	04/13/21 23:27	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI1 TE012919259

Job ID: 890-513-1
 SDG: Eddy

Client Sample ID: FS02

Lab Sample ID: 890-513-2

Date Collected: 04/09/21 13:29

Matrix: Solid

Date Received: 04/13/21 08:30

Sample Depth: - 4

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	55.7		50.1	mg/Kg		04/13/21 13:44	04/13/21 23:29	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1	mg/Kg		04/13/21 13:44	04/13/21 23:29	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		04/13/21 13:44	04/13/21 23:29	1
Total TPH	55.7		50.1	mg/Kg		04/13/21 13:44	04/13/21 23:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130	04/13/21 13:44	04/13/21 23:29	1
o-Terphenyl	78		70 - 130	04/13/21 13:44	04/13/21 23:29	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	102		5.04	mg/Kg			04/14/21 09:47	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-513-1
SDG: Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-513-1	FS01	112	99
890-513-2	FS02	114	104
LCS 880-1714/1-A	Lab Control Sample	98	100
LCSD 880-1714/2-A	Lab Control Sample Dup	104	99
MB 880-1714/5-A	Method Blank	98	98

Surrogate Legend

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

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-513-1	FS01	103	90
890-513-2	FS02	87	78
LCS 880-1739/2-A	Lab Control Sample	91	77
LCSD 880-1739/3-A	Lab Control Sample Dup	99	82
MB 880-1739/1-A	Method Blank	97	89

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI1 TE012919259

Job ID: 890-513-1
 SDG: Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-1714/5-A
 Matrix: Solid
 Analysis Batch: 1716

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 1714

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/13/21 11:49	04/13/21 17:18	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/13/21 11:49	04/13/21 17:18	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/13/21 11:49	04/13/21 17:18	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/13/21 11:49	04/13/21 17:18	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/13/21 11:49	04/13/21 17:18	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/13/21 11:49	04/13/21 17:18	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/13/21 11:49	04/13/21 17:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	04/13/21 11:49	04/13/21 17:18	1
1,4-Difluorobenzene (Surr)	98		70 - 130	04/13/21 11:49	04/13/21 17:18	1

Lab Sample ID: LCS 880-1714/1-A
 Matrix: Solid
 Analysis Batch: 1716

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 1714

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.08445		mg/Kg		84	70 - 130
Toluene	0.100	0.08338		mg/Kg		83	70 - 130
Ethylbenzene	0.100	0.08352		mg/Kg		84	70 - 130
m-Xylene & p-Xylene	0.200	0.1666		mg/Kg		83	70 - 130
o-Xylene	0.100	0.08244		mg/Kg		82	70 - 130

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

Lab Sample ID: LCSD 880-1714/2-A
 Matrix: Solid
 Analysis Batch: 1716

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 1714

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.08523		mg/Kg		85	70 - 130	1	35
Toluene	0.100	0.08636		mg/Kg		86	70 - 130	4	35
Ethylbenzene	0.100	0.09032		mg/Kg		90	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.1803		mg/Kg		90	70 - 130	8	35
o-Xylene	0.100	0.08961		mg/Kg		90	70 - 130	8	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU D11 TE012919259

Job ID: 890-513-1
SDG: Eddy

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

Lab Sample ID: MB 880-1739/1-A
Matrix: Solid
Analysis Batch: 1732

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1739

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/13/21 13:44	04/13/21 14:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/13/21 13:44	04/13/21 14:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/13/21 13:44	04/13/21 14:25	1
Total TPH	<50.0	U	50.0	mg/Kg		04/13/21 13:44	04/13/21 14:25	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	04/13/21 13:44	04/13/21 14:25	1
o-Terphenyl	89		70 - 130	04/13/21 13:44	04/13/21 14:25	1

Lab Sample ID: LCS 880-1739/2-A
Matrix: Solid
Analysis Batch: 1732

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1739

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1062		mg/Kg		106	70 - 130
Diesel Range Organics (Over C10-C28)	1000	832.9		mg/Kg		83	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	77		70 - 130

Lab Sample ID: LCSD 880-1739/3-A
Matrix: Solid
Analysis Batch: 1732

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1739

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1087		mg/Kg		109	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	922.0		mg/Kg		92	70 - 130	10	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	82		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-1722/1-A
Matrix: Solid
Analysis Batch: 1753

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/13/21 21:15	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI1 TE012919259

Job ID: 890-513-1
 SDG: Eddy

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-1722/2-A
 Matrix: Solid
 Analysis Batch: 1753

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	249.8		mg/Kg		100	90 - 110

Lab Sample ID: LCSD 880-1722/3-A
 Matrix: Solid
 Analysis Batch: 1753

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	248.8		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 890-513-2 MS
 Matrix: Solid
 Analysis Batch: 1753

Client Sample ID: FS02
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	102		252	369.3		mg/Kg		106	90 - 110

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-513-1
SDG: Eddy

GC VOA

Prep Batch: 1714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-513-1	FS01	Total/NA	Solid	5035	
890-513-2	FS02	Total/NA	Solid	5035	
MB 880-1714/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-1714/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-1714/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 1716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-513-1	FS01	Total/NA	Solid	8021B	1714
890-513-2	FS02	Total/NA	Solid	8021B	1714
MB 880-1714/5-A	Method Blank	Total/NA	Solid	8021B	1714
LCS 880-1714/1-A	Lab Control Sample	Total/NA	Solid	8021B	1714
LCSD 880-1714/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	1714

GC Semi VOA

Analysis Batch: 1732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-513-1	FS01	Total/NA	Solid	8015B NM	1739
890-513-2	FS02	Total/NA	Solid	8015B NM	1739
MB 880-1739/1-A	Method Blank	Total/NA	Solid	8015B NM	1739
LCS 880-1739/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	1739
LCSD 880-1739/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	1739

Prep Batch: 1739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-513-1	FS01	Total/NA	Solid	8015NM Prep	
890-513-2	FS02	Total/NA	Solid	8015NM Prep	
MB 880-1739/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-1739/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-1739/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 1722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-513-1	FS01	Soluble	Solid	DI Leach	
890-513-2	FS02	Soluble	Solid	DI Leach	
MB 880-1722/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-1722/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-1722/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-513-2 MS	FS02	Soluble	Solid	DI Leach	
890-513-2 MSD	FS02	Soluble	Solid	DI Leach	

Analysis Batch: 1753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-513-1	FS01	Soluble	Solid	300.0	1722
890-513-2	FS02	Soluble	Solid	300.0	1722
MB 880-1722/1-A	Method Blank	Soluble	Solid	300.0	1722
LCS 880-1722/2-A	Lab Control Sample	Soluble	Solid	300.0	1722
LCSD 880-1722/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	1722
890-513-2 MS	FS02	Soluble	Solid	300.0	1722

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-513-1
SDG: Eddy

HPLC/IC (Continued)

Analysis Batch: 1753 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-513-2 MSD	FS02	Soluble	Solid	300.0	1722

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Lab Chronicle

Client: WSP USA Inc.
 Project/Site: JRU DI1 TE012919259

Job ID: 890-513-1
 SDG: Eddy

Client Sample ID: FS01

Lab Sample ID: 890-513-1

Date Collected: 04/09/21 12:50

Matrix: Solid

Date Received: 04/13/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1714	04/13/21 11:49	KL	XM
Total/NA	Analysis	8021B		1	1716	04/13/21 23:07	KL	XM
Total/NA	Prep	8015NM Prep			1739	04/13/21 13:44	DM	XM
Total/NA	Analysis	8015B NM		1	1732	04/13/21 23:08	AJ	XM
Soluble	Leach	DI Leach			1722	04/13/21 16:50	SC	XM
Soluble	Analysis	300.0		1	1753	04/13/21 22:44	CH	XM

Client Sample ID: FS02

Lab Sample ID: 890-513-2

Date Collected: 04/09/21 13:29

Matrix: Solid

Date Received: 04/13/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1714	04/13/21 11:49	KL	XM
Total/NA	Analysis	8021B		1	1716	04/13/21 23:27	KL	XM
Total/NA	Prep	8015NM Prep			1739	04/13/21 13:44	DM	XM
Total/NA	Analysis	8015B NM		1	1732	04/13/21 23:29	AJ	XM
Soluble	Leach	DI Leach			1722	04/13/21 16:50	SC	XM
Soluble	Analysis	300.0		1	1753	04/14/21 09:47	CH	XM

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-513-1
SDG: Eddy

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
 Project/Site: JRU DI1 TE012919259

Job ID: 890-513-1
 SDG: Eddy

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-513-1
SDG: Eddy

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-513-1	FS01	Solid	04/09/21 12:50	04/13/21 08:30	- 4
890-513-2	FS02	Solid	04/09/21 13:29	04/13/21 08:30	- 4

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Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX (806)794-1296
 Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8900) Tampa, FL (813-620-2000)

Chain of Custody

Work Order No: _____

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littell
Company Name:	WSP USA Inc., Permian office	Company Name:	XTO Energy
Address:	3900 North A Street	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 236-3849	Email:	will.mather@wsp.com, dan.moir@wsp.com

Program: UST/PST	<input type="checkbox"/> RP	<input type="checkbox"/> Crownfields	<input type="checkbox"/> RC	<input type="checkbox"/> perfund
State of Project:				
Reporting Level:	<input type="checkbox"/> Level II <input type="checkbox"/> Level III <input type="checkbox"/> P/UST <input type="checkbox"/> RP <input type="checkbox"/> Level IV			
Deliverables:	<input type="checkbox"/> EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:			

Project Name:	JRU D11	Turn Around	
Project Number:	TE012919259	Routine	<input type="checkbox"/>
P.O. Number:	Eddy	Rush:	<input checked="" type="checkbox"/> 24H
Sampler's Name:	William Mather	Due Date:	

SAMPLE RECEIPT	Temp Blank:	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Wet Ice:	<input checked="" type="radio"/> Yes	<input type="radio"/> No
	Temperature (°C):	141.2 Thermometer ID: <u>ZVM-003</u>				
	Received Inact:	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Correction Factor:		
	Cooler Custody Seals:	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Total Containers:		



Sample Identification	Matrix	Date		Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST																	
		Sampled	Time Sampled						As	Ba	Be	Bd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO2
FS01	S	4/9/2021	12:50	4'	1	X	X	X																		
FS02	S	4/9/2021	13:29	4'	1	X	X	X																		
<i>[Handwritten Signature]</i>																										

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	4-13-21 9:15 am	<i>[Signature]</i>	<i>[Signature]</i>	4-13-21 0830

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Eurofins Xenco, Carlsbad

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

Chain of Custody Record



Client Information (Sub Contract Lab)

Client Contact: _____
 Shipping/Receiving: _____
 Company: Eurofins Xenco
 Address: 1211 W Florida Ave
 City: Midland
 State, Zip: TX, 79701
 Phone: 432-704-5440 (Tel)
 Email: _____

Sampler: _____
 Phone: _____
 Lab PM: Kramer, Jessica
 E-Mail: jessica.kramer@eurofinsnet.com

Accreditations Required (See note)
 NELAP - Louisiana NELAP - Texas

Carrier Tracking No(s): _____
 State of Origin: New Mexico

COC No: 890-161 1
 Page: 1 of 1
 Job #: 890-513-1

Due Date Requested: 4/14/2021
 TAT Requested (days): _____

Analysis Requested

PO #: _____
 WO #: _____
 Project #: 89000004
 SSGW#: _____

Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8016MOD_NM/8016NM_S_Prep Full TPH	
300_ORGFM_28/DI_LEACH Chloride	
8021B/6036FP_Calc BTEX	

Preservation Codes
 A. HCL
 B. NaOH
 C. Zn Acetate
 D. Nitric Acid
 E. NaHSO4
 F. MeOH
 G. Amchlor
 H. Ascorbic Acid
 I. Ice
 J. DMSO
 K. EDTA
 L. EDA
 M. Hexane
 N. None
 O. AsNaO2
 P. Na2O4S
 Q. Na2SO3
 R. Na2S2O3
 S. H2SO4
 T. TSP Dodecylhydrate
 U. Acetone
 V. MeOH
 W. pH 4.5
 Z. other (Specify)
 Other: _____

Sample Identification - Client ID (Lab ID)

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=oil, B=issue, A=air)	Preservation Code
FS01 (890-513-1)	4/9/21	12:50	Mountain	Solid	
FS02 (890-513-2)	4/9/21	13:29	Mountain	Solid	

Special Instructions/Note:

Total Number of containers: 1

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

Possible Hazard Identification

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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements

Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: *Joe Duff* Date/Time: 4.13.21 Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-513-1

SDG Number: Eddy

Login Number: 513

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-513-1

SDG Number: Eddy

Login Number: 513

List Number: 2

Creator: Copeland, Tatiana

List Source: Eurofins Midland

List Creation: 04/13/21 02:42 PM

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

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-521-1
Laboratory Sample Delivery Group: Eddy County
Client Project/Site: JRU D11 TE012919259
Revision: 1

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

Attn: Dan Moir

Authorized for release by:
4/19/2021 10:31:24 AM

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

LINKS

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

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

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Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Laboratory Job ID: 890-521-1
SDG: Eddy County

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

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, high biased.
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
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
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins Xenco, Carlsbad

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

Job ID: 890-521-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-521-1

Comments

No additional comments.

Revision

The report being provided is a revision of the original report sent on 4/15/2021. The report (revision 1) is being revised due to: Per client email, requesting TPH re run on sample 001.

Receipt

The samples were received on 4/14/2021 9:55 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 was 1.0° C.

Receipt Exceptions

Per client email, requesting TPH re run on sample 001

The following samples analyzed for method <FRACTION_METHOD> were received and analyzed from an unpreserved bulk soil jar: SW02 (890-521-1), SW03 (890-521-2), SW04 (890-521-3), FS03 (890-521-4), FS06 (890-521-5), FS07 (890-521-6), FS08 (890-521-7), FS09 (890-521-8), FS10 (890-521-9), FS11 (890-521-10) and FS12 (890-521-11).
BTEX8021

GC VOA

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

GC Semi VOA

Method 8015B NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-1802 and analytical batch 880-1775 recovered outside control limits for the following analytes: < Gasoline Range Organics (GRO)-C6-C10>.

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

General Chemistry

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

Organic Prep

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

VOA Prep

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



Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259Job ID: 890-521-1
SDG: Eddy County

Client Sample ID: SW02

Lab Sample ID: 890-521-1

Date Collected: 04/13/21 10:30

Matrix: Solid

Date Received: 04/14/21 09:55

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 18:05	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 18:05	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 18:05	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		04/14/21 14:40	04/14/21 18:05	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 18:05	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		04/14/21 14:40	04/14/21 18:05	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 18:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	04/14/21 14:40	04/14/21 18:05	1
1,4-Difluorobenzene (Surr)	106		70 - 130	04/14/21 14:40	04/14/21 18:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	50.4		50.0	mg/Kg		04/15/21 08:24	04/16/21 08:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/15/21 08:24	04/16/21 08:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/15/21 08:24	04/16/21 08:00	1
Total TPH	50.4		50.0	mg/Kg		04/15/21 08:24	04/16/21 08:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane				04/15/21 08:24	04/16/21 08:00	1
o-Terphenyl				04/15/21 08:24	04/16/21 08:00	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	390		5.05	mg/Kg			04/15/21 12:16	1

Client Sample ID: SW03

Lab Sample ID: 890-521-2

Date Collected: 04/13/21 11:00

Matrix: Solid

Date Received: 04/14/21 09:55

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		04/14/21 14:40	04/14/21 18:25	1
Toluene	<0.00202	U	0.00202	mg/Kg		04/14/21 14:40	04/14/21 18:25	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		04/14/21 14:40	04/14/21 18:25	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		04/14/21 14:40	04/14/21 18:25	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		04/14/21 14:40	04/14/21 18:25	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		04/14/21 14:40	04/14/21 18:25	1
Total BTEX	<0.00202	U	0.00202	mg/Kg		04/14/21 14:40	04/14/21 18:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130	04/14/21 14:40	04/14/21 18:25	1
1,4-Difluorobenzene (Surr)	107		70 - 130	04/14/21 14:40	04/14/21 18:25	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259Job ID: 890-521-1
SDG: Eddy County

Client Sample ID: SW03

Lab Sample ID: 890-521-2

Date Collected: 04/13/21 11:00

Matrix: Solid

Date Received: 04/14/21 09:55

Sample Depth: 0 - 4

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U ** *1	49.9	mg/Kg		04/14/21 14:55	04/14/21 23:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/14/21 14:55	04/14/21 23:12	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/14/21 14:55	04/14/21 23:12	1
Total TPH	<49.9	U	49.9	mg/Kg		04/14/21 14:55	04/14/21 23:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130	04/14/21 14:55	04/14/21 23:12	1
o-Terphenyl	112		70 - 130	04/14/21 14:55	04/14/21 23:12	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	365		4.98	mg/Kg			04/15/21 12:22	1

Client Sample ID: SW04

Lab Sample ID: 890-521-3

Date Collected: 04/13/21 10:00

Matrix: Solid

Date Received: 04/14/21 09:55

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 18:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 18:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 18:46	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/14/21 14:40	04/14/21 18:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 18:46	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/14/21 14:40	04/14/21 18:46	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 18:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	04/14/21 14:40	04/14/21 18:46	1
1,4-Difluorobenzene (Surr)	106		70 - 130	04/14/21 14:40	04/14/21 18:46	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	71.9	** *1	49.8	mg/Kg		04/14/21 14:55	04/14/21 23:33	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		04/14/21 14:55	04/14/21 23:33	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		04/14/21 14:55	04/14/21 23:33	1
Total TPH	71.9		49.8	mg/Kg		04/14/21 14:55	04/14/21 23:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	116		70 - 130	04/14/21 14:55	04/14/21 23:33	1
o-Terphenyl	114		70 - 130	04/14/21 14:55	04/14/21 23:33	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	221		5.04	mg/Kg			04/15/21 12:38	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

Client Sample ID: FS03

Lab Sample ID: 890-521-4

Date Collected: 04/13/21 13:42

Matrix: Solid

Date Received: 04/14/21 09:55

Sample Depth: 4 - 7

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 19:06	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 19:06	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 19:06	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/14/21 14:40	04/14/21 19:06	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 19:06	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/14/21 14:40	04/14/21 19:06	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 19:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	04/14/21 14:40	04/14/21 19:06	1
1,4-Difluorobenzene (Surr)	108		70 - 130	04/14/21 14:40	04/14/21 19:06	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	50.4	** *1	49.9	mg/Kg		04/14/21 14:55	04/14/21 23:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/14/21 14:55	04/14/21 23:54	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/14/21 14:55	04/14/21 23:54	1
Total TPH	50.4		49.9	mg/Kg		04/14/21 14:55	04/14/21 23:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130	04/14/21 14:55	04/14/21 23:54	1
o-Terphenyl	111		70 - 130	04/14/21 14:55	04/14/21 23:54	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	364		4.97	mg/Kg			04/15/21 12:44	1

Client Sample ID: FS06

Lab Sample ID: 890-521-5

Date Collected: 04/13/21 13:51

Matrix: Solid

Date Received: 04/14/21 09:55

Sample Depth: 2 - 5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/14/21 14:40	04/14/21 19:26	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/14/21 14:40	04/14/21 19:26	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/14/21 14:40	04/14/21 19:26	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/14/21 14:40	04/14/21 19:26	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/14/21 14:40	04/14/21 19:26	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/14/21 14:40	04/14/21 19:26	1
Total BTEX	<0.00199	U	0.00199	mg/Kg		04/14/21 14:40	04/14/21 19:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130	04/14/21 14:40	04/14/21 19:26	1
1,4-Difluorobenzene (Surr)	108		70 - 130	04/14/21 14:40	04/14/21 19:26	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

Client Sample ID: FS06

Lab Sample ID: 890-521-5

Date Collected: 04/13/21 13:51

Matrix: Solid

Date Received: 04/14/21 09:55

Sample Depth: 2 - 5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	61.4	*+ *1	50.0	mg/Kg		04/14/21 14:55	04/15/21 00:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/14/21 14:55	04/15/21 00:15	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/14/21 14:55	04/15/21 00:15	1
Total TPH	61.4		50.0	mg/Kg		04/14/21 14:55	04/15/21 00:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	122		70 - 130	04/14/21 14:55	04/15/21 00:15	1
o-Terphenyl	121		70 - 130	04/14/21 14:55	04/15/21 00:15	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	503		4.95	mg/Kg			04/15/21 13:00	1

Client Sample ID: FS07

Lab Sample ID: 890-521-6

Date Collected: 04/13/21 11:18

Matrix: Solid

Date Received: 04/14/21 09:55

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 19:47	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 19:47	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 19:47	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		04/14/21 14:40	04/14/21 19:47	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 19:47	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		04/14/21 14:40	04/14/21 19:47	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 19:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	04/14/21 14:40	04/14/21 19:47	1
1,4-Difluorobenzene (Surr)	107		70 - 130	04/14/21 14:40	04/14/21 19:47	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	83.6	*+ *1	50.0	mg/Kg		04/14/21 14:55	04/15/21 00:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/14/21 14:55	04/15/21 00:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/14/21 14:55	04/15/21 00:36	1
Total TPH	83.6		50.0	mg/Kg		04/14/21 14:55	04/15/21 00:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	04/14/21 14:55	04/15/21 00:36	1
o-Terphenyl	105		70 - 130	04/14/21 14:55	04/15/21 00:36	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	289		5.05	mg/Kg			04/15/21 13:06	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259Job ID: 890-521-1
SDG: Eddy County

Client Sample ID: FS08

Lab Sample ID: 890-521-7

Date Collected: 04/13/21 11:20

Matrix: Solid

Date Received: 04/14/21 09:55

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		04/14/21 14:40	04/14/21 20:07	1
Toluene	<0.00201	U	0.00201	mg/Kg		04/14/21 14:40	04/14/21 20:07	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		04/14/21 14:40	04/14/21 20:07	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		04/14/21 14:40	04/14/21 20:07	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		04/14/21 14:40	04/14/21 20:07	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		04/14/21 14:40	04/14/21 20:07	1
Total BTEX	<0.00201	U	0.00201	mg/Kg		04/14/21 14:40	04/14/21 20:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	04/14/21 14:40	04/14/21 20:07	1
1,4-Difluorobenzene (Surr)	108		70 - 130	04/14/21 14:40	04/14/21 20:07	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	99.1	*+ *1	50.0	mg/Kg		04/14/21 14:55	04/15/21 00:56	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/14/21 14:55	04/15/21 00:56	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/14/21 14:55	04/15/21 00:56	1
Total TPH	99.1		50.0	mg/Kg		04/14/21 14:55	04/15/21 00:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130	04/14/21 14:55	04/15/21 00:56	1
o-Terphenyl	115		70 - 130	04/14/21 14:55	04/15/21 00:56	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	162		5.05	mg/Kg			04/15/21 13:11	1

Client Sample ID: FS09

Lab Sample ID: 890-521-8

Date Collected: 04/13/21 11:23

Matrix: Solid

Date Received: 04/14/21 09:55

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		04/14/21 14:40	04/14/21 20:28	1
Toluene	<0.00202	U	0.00202	mg/Kg		04/14/21 14:40	04/14/21 20:28	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		04/14/21 14:40	04/14/21 20:28	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		04/14/21 14:40	04/14/21 20:28	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		04/14/21 14:40	04/14/21 20:28	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		04/14/21 14:40	04/14/21 20:28	1
Total BTEX	<0.00202	U	0.00202	mg/Kg		04/14/21 14:40	04/14/21 20:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	04/14/21 14:40	04/14/21 20:28	1
1,4-Difluorobenzene (Surr)	108		70 - 130	04/14/21 14:40	04/14/21 20:28	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259Job ID: 890-521-1
SDG: Eddy County

Client Sample ID: FS09

Lab Sample ID: 890-521-8

Date Collected: 04/13/21 11:23

Matrix: Solid

Date Received: 04/14/21 09:55

Sample Depth: - 4

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U ** *1	50.0	mg/Kg		04/14/21 14:55	04/15/21 01:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/14/21 14:55	04/15/21 01:17	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/14/21 14:55	04/15/21 01:17	1
Total TPH	<50.0	U	50.0	mg/Kg		04/14/21 14:55	04/15/21 01:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	04/14/21 14:55	04/15/21 01:17	1
o-Terphenyl	103		70 - 130	04/14/21 14:55	04/15/21 01:17	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	286		4.98	mg/Kg			04/15/21 13:17	1

Client Sample ID: FS10

Lab Sample ID: 890-521-9

Date Collected: 04/13/21 11:26

Matrix: Solid

Date Received: 04/14/21 09:55

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		04/14/21 14:40	04/14/21 20:48	1
Toluene	<0.00202	U	0.00202	mg/Kg		04/14/21 14:40	04/14/21 20:48	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		04/14/21 14:40	04/14/21 20:48	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		04/14/21 14:40	04/14/21 20:48	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		04/14/21 14:40	04/14/21 20:48	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		04/14/21 14:40	04/14/21 20:48	1
Total BTEX	<0.00202	U	0.00202	mg/Kg		04/14/21 14:40	04/14/21 20:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	04/14/21 14:40	04/14/21 20:48	1
1,4-Difluorobenzene (Surr)	108		70 - 130	04/14/21 14:40	04/14/21 20:48	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	72.4	** *1	50.0	mg/Kg		04/14/21 14:55	04/15/21 01:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/14/21 14:55	04/15/21 01:38	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/14/21 14:55	04/15/21 01:38	1
Total TPH	72.4		50.0	mg/Kg		04/14/21 14:55	04/15/21 01:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130	04/14/21 14:55	04/15/21 01:38	1
o-Terphenyl	113		70 - 130	04/14/21 14:55	04/15/21 01:38	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	488		5.00	mg/Kg			04/15/21 13:22	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259Job ID: 890-521-1
SDG: Eddy County

Client Sample ID: FS11

Lab Sample ID: 890-521-10

Date Collected: 04/13/21 11:28

Matrix: Solid

Date Received: 04/14/21 09:55

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 21:08	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 21:08	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 21:08	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/14/21 14:40	04/14/21 21:08	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 21:08	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/14/21 14:40	04/14/21 21:08	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 21:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	04/14/21 14:40	04/14/21 21:08	1
1,4-Difluorobenzene (Surr)	109		70 - 130	04/14/21 14:40	04/14/21 21:08	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	96.1	** *1	50.1	mg/Kg		04/14/21 14:55	04/15/21 01:59	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1	mg/Kg		04/14/21 14:55	04/15/21 01:59	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		04/14/21 14:55	04/15/21 01:59	1
Total TPH	96.1		50.1	mg/Kg		04/14/21 14:55	04/15/21 01:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	04/14/21 14:55	04/15/21 01:59	1
o-Terphenyl	105		70 - 130	04/14/21 14:55	04/15/21 01:59	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	152		5.00	mg/Kg			04/15/21 13:28	1

Client Sample ID: FS12

Lab Sample ID: 890-521-11

Date Collected: 04/13/21 11:29

Matrix: Solid

Date Received: 04/14/21 09:55

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 23:39	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 23:39	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 23:39	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/14/21 14:40	04/14/21 23:39	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 23:39	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/14/21 14:40	04/14/21 23:39	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 23:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	04/14/21 14:40	04/14/21 23:39	1
1,4-Difluorobenzene (Surr)	106		70 - 130	04/14/21 14:40	04/14/21 23:39	1

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Client Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
 SDG: Eddy County

Client Sample ID: FS12
Date Collected: 04/13/21 11:29
Date Received: 04/14/21 09:55
Sample Depth: - 4

Lab Sample ID: 890-521-11
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	95.4	*+ *1	50.0	mg/Kg		04/14/21 14:55	04/15/21 02:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/14/21 14:55	04/15/21 02:41	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/14/21 14:55	04/15/21 02:41	1
Total TPH	95.4		50.0	mg/Kg		04/14/21 14:55	04/15/21 02:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	04/14/21 14:55	04/15/21 02:41	1
o-Terphenyl	107		70 - 130	04/14/21 14:55	04/15/21 02:41	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	95.2		4.96	mg/Kg			04/15/21 13:34	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-521-1	SW02	102	106
890-521-1 MS	SW02	102	104
890-521-1 MSD	SW02	105	105
890-521-2	SW03	110	107
890-521-3	SW04	108	106
890-521-4	FS03	109	108
890-521-5	FS06	110	108
890-521-6	FS07	108	107
890-521-7	FS08	107	108
890-521-8	FS09	108	108
890-521-9	FS10	109	108
890-521-10	FS11	111	109
890-521-11	FS12	108	106
LCS 880-1801/1-A	Lab Control Sample	99	105
LCSD 880-1801/2-A	Lab Control Sample Dup	97	107
MB 880-1801/5-A	Method Blank	99	99

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
890-521-1	SW02		

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-521-1 MS	SW02	114	104
890-521-1 MSD	SW02	121	105
890-521-2	SW03	115	112
890-521-3	SW04	116	114
890-521-4	FS03	108	111
890-521-5	FS06	122	121
890-521-6	FS07	103	105
890-521-7	FS08	111	115
890-521-8	FS09	102	103
890-521-9	FS10	113	113
890-521-10	FS11	103	105
890-521-11	FS12	107	107

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Surrogate Summary

Client: WSP USA Inc.
 Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
 SDG: Eddy County

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
LCS 880-1802/2-A	Lab Control Sample	119	108
LCS 880-1813/2-A	Lab Control Sample	98	87
LCSD 880-1802/3-A	Lab Control Sample Dup	113	99
LCSD 880-1813/3-A	Lab Control Sample Dup	96	85
MB 880-1802/1-A	Method Blank	115	116
MB 880-1813/1-A	Method Blank	97	94

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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

QC Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
 SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-1801/5-A
 Matrix: Solid
 Analysis Batch: 1799

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 1801

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 17:36	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 17:36	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 17:36	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/14/21 14:40	04/14/21 17:36	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 17:36	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/14/21 14:40	04/14/21 17:36	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		04/14/21 14:40	04/14/21 17:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	04/14/21 14:40	04/14/21 17:36	1
1,4-Difluorobenzene (Surr)	99		70 - 130	04/14/21 14:40	04/14/21 17:36	1

Lab Sample ID: LCS 880-1801/1-A
 Matrix: Solid
 Analysis Batch: 1799

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 1801

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09395		mg/Kg		94	70 - 130
Toluene	0.100	0.1010		mg/Kg		101	70 - 130
Ethylbenzene	0.100	0.1066		mg/Kg		107	70 - 130
m-Xylene & p-Xylene	0.200	0.2151		mg/Kg		108	70 - 130
o-Xylene	0.100	0.1051		mg/Kg		105	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: LCSD 880-1801/2-A
 Matrix: Solid
 Analysis Batch: 1799

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 1801

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.100	0.09238		mg/Kg		92	70 - 130	2	35
Toluene	0.100	0.09769		mg/Kg		98	70 - 130	3	35
Ethylbenzene	0.100	0.1020		mg/Kg		102	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2055		mg/Kg		103	70 - 130	5	35
o-Xylene	0.100	0.1006		mg/Kg		101	70 - 130	4	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: 890-521-1 MS
 Matrix: Solid
 Analysis Batch: 1799

Client Sample ID: SW02
 Prep Type: Total/NA
 Prep Batch: 1801

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.0998	0.08387		mg/Kg		84	70 - 130

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

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

Lab Sample ID: 890-521-1 MS
Matrix: Solid
Analysis Batch: 1799

Client Sample ID: SW02
Prep Type: Total/NA
Prep Batch: 1801

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	<0.00200	U	0.0998	0.08832		mg/Kg		88	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.09428		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.200	0.1919		mg/Kg		96	70 - 130
o-Xylene	<0.00200	U	0.0998	0.09330		mg/Kg		93	70 - 130
MS MS									
Surrogate	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	102		70 - 130						
1,4-Difluorobenzene (Surr)	104		70 - 130						

Lab Sample ID: 890-521-1 MSD
Matrix: Solid
Analysis Batch: 1799

Client Sample ID: SW02
Prep Type: Total/NA
Prep Batch: 1801

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0998	0.08197		mg/Kg		82	70 - 130	2	35
Toluene	<0.00200	U	0.0998	0.08975		mg/Kg		90	70 - 130	2	35
Ethylbenzene	<0.00200	U	0.0998	0.09628		mg/Kg		96	70 - 130	2	35
m-Xylene & p-Xylene	<0.00401	U	0.200	0.1980		mg/Kg		99	70 - 130	3	35
o-Xylene	<0.00200	U	0.0998	0.09528		mg/Kg		95	70 - 130	2	35
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	105		70 - 130								
1,4-Difluorobenzene (Surr)	105		70 - 130								

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

Lab Sample ID: MB 880-1802/1-A
Matrix: Solid
Analysis Batch: 1775

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1802

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/14/21 14:55	04/14/21 21:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/14/21 14:55	04/14/21 21:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/14/21 14:55	04/14/21 21:04	1
Total TPH	<50.0	U	50.0	mg/Kg		04/14/21 14:55	04/14/21 21:04	1
MB MB								
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
1-Chlorooctane	115		70 - 130	04/14/21 14:55	04/14/21 21:04	1		
o-Terphenyl	116		70 - 130	04/14/21 14:55	04/14/21 21:04	1		

Lab Sample ID: LCS 880-1802/2-A
Matrix: Solid
Analysis Batch: 1775

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1802

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1533	*+	mg/Kg		153	70 - 130

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

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

Lab Sample ID: MB 880-1813/1-A
Matrix: Solid
Analysis Batch: 1820

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1813

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/15/21 08:24	04/15/21 11:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/15/21 08:24	04/15/21 11:52	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/15/21 08:24	04/15/21 11:52	1
Total TPH	<50.0	U	50.0	mg/Kg		04/15/21 08:24	04/15/21 11:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	04/15/21 08:24	04/15/21 11:52	1
o-Terphenyl	94		70 - 130	04/15/21 08:24	04/15/21 11:52	1

Lab Sample ID: LCS 880-1813/2-A
Matrix: Solid
Analysis Batch: 1820

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1813

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1201		mg/Kg		120	70 - 130
Diesel Range Organics (Over C10-C28)	1000	968.0		mg/Kg		97	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	87		70 - 130

Lab Sample ID: LCSD 880-1813/3-A
Matrix: Solid
Analysis Batch: 1820

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1813

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1074		mg/Kg		107	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	1000	942.8		mg/Kg		94	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	96		70 - 130
o-Terphenyl	85		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-1811/1-A
Matrix: Solid
Analysis Batch: 1824

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/15/21 10:47	1

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QC Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
 SDG: Eddy County

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-1811/2-A
Matrix: Solid
Analysis Batch: 1824

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	245.1		mg/Kg		98	90 - 110

Lab Sample ID: LCSD 880-1811/3-A
Matrix: Solid
Analysis Batch: 1824

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	244.9		mg/Kg		98	90 - 110	0	20

Lab Sample ID: 890-521-2 MS
Matrix: Solid
Analysis Batch: 1824

Client Sample ID: SW03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	365		249	605.9		mg/Kg		97	90 - 110

Lab Sample ID: 890-521-2 MSD
Matrix: Solid
Analysis Batch: 1824

Client Sample ID: SW03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	365		249	594.8		mg/Kg		92	90 - 110	2	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259Job ID: 890-521-1
SDG: Eddy County

GC VOA

Analysis Batch: 1799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-521-1	SW02	Total/NA	Solid	8021B	1801
890-521-2	SW03	Total/NA	Solid	8021B	1801
890-521-3	SW04	Total/NA	Solid	8021B	1801
890-521-4	FS03	Total/NA	Solid	8021B	1801
890-521-5	FS06	Total/NA	Solid	8021B	1801
890-521-6	FS07	Total/NA	Solid	8021B	1801
890-521-7	FS08	Total/NA	Solid	8021B	1801
890-521-8	FS09	Total/NA	Solid	8021B	1801
890-521-9	FS10	Total/NA	Solid	8021B	1801
890-521-10	FS11	Total/NA	Solid	8021B	1801
890-521-11	FS12	Total/NA	Solid	8021B	1801
MB 880-1801/5-A	Method Blank	Total/NA	Solid	8021B	1801
LCS 880-1801/1-A	Lab Control Sample	Total/NA	Solid	8021B	1801
LCS 880-1801/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	1801
890-521-1 MS	SW02	Total/NA	Solid	8021B	1801
890-521-1 MSD	SW02	Total/NA	Solid	8021B	1801

Prep Batch: 1801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-521-1	SW02	Total/NA	Solid	5035	
890-521-2	SW03	Total/NA	Solid	5035	
890-521-3	SW04	Total/NA	Solid	5035	
890-521-4	FS03	Total/NA	Solid	5035	
890-521-5	FS06	Total/NA	Solid	5035	
890-521-6	FS07	Total/NA	Solid	5035	
890-521-7	FS08	Total/NA	Solid	5035	
890-521-8	FS09	Total/NA	Solid	5035	
890-521-9	FS10	Total/NA	Solid	5035	
890-521-10	FS11	Total/NA	Solid	5035	
890-521-11	FS12	Total/NA	Solid	5035	
MB 880-1801/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-1801/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 880-1801/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-521-1 MS	SW02	Total/NA	Solid	5035	
890-521-1 MSD	SW02	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 1775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-521-2	SW03	Total/NA	Solid	8015B NM	1802
890-521-3	SW04	Total/NA	Solid	8015B NM	1802
890-521-4	FS03	Total/NA	Solid	8015B NM	1802
890-521-5	FS06	Total/NA	Solid	8015B NM	1802
890-521-6	FS07	Total/NA	Solid	8015B NM	1802
890-521-7	FS08	Total/NA	Solid	8015B NM	1802
890-521-8	FS09	Total/NA	Solid	8015B NM	1802
890-521-9	FS10	Total/NA	Solid	8015B NM	1802
890-521-10	FS11	Total/NA	Solid	8015B NM	1802
890-521-11	FS12	Total/NA	Solid	8015B NM	1802
MB 880-1802/1-A	Method Blank	Total/NA	Solid	8015B NM	1802

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

GC Semi VOA (Continued)

Analysis Batch: 1775 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-1802/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	1802
LCSD 880-1802/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	1802
890-521-1 MS	SW02	Total/NA	Solid	8015B NM	1802
890-521-1 MSD	SW02	Total/NA	Solid	8015B NM	1802

Prep Batch: 1802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-521-2	SW03	Total/NA	Solid	8015NM Prep	
890-521-3	SW04	Total/NA	Solid	8015NM Prep	
890-521-4	FS03	Total/NA	Solid	8015NM Prep	
890-521-5	FS06	Total/NA	Solid	8015NM Prep	
890-521-6	FS07	Total/NA	Solid	8015NM Prep	
890-521-7	FS08	Total/NA	Solid	8015NM Prep	
890-521-8	FS09	Total/NA	Solid	8015NM Prep	
890-521-9	FS10	Total/NA	Solid	8015NM Prep	
890-521-10	FS11	Total/NA	Solid	8015NM Prep	
890-521-11	FS12	Total/NA	Solid	8015NM Prep	
MB 880-1802/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-1802/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-1802/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-521-1 MS	SW02	Total/NA	Solid	8015NM Prep	
890-521-1 MSD	SW02	Total/NA	Solid	8015NM Prep	

Prep Batch: 1813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-521-1	SW02	Total/NA	Solid	8015NM Prep	
MB 880-1813/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-1813/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-1813/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 1820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-521-1	SW02	Total/NA	Solid	8015B NM	1813
MB 880-1813/1-A	Method Blank	Total/NA	Solid	8015B NM	1813
LCS 880-1813/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	1813
LCSD 880-1813/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	1813

HPLC/IC

Leach Batch: 1811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-521-1	SW02	Soluble	Solid	DI Leach	
890-521-2	SW03	Soluble	Solid	DI Leach	
890-521-3	SW04	Soluble	Solid	DI Leach	
890-521-4	FS03	Soluble	Solid	DI Leach	
890-521-5	FS06	Soluble	Solid	DI Leach	
890-521-6	FS07	Soluble	Solid	DI Leach	
890-521-7	FS08	Soluble	Solid	DI Leach	
890-521-8	FS09	Soluble	Solid	DI Leach	
890-521-9	FS10	Soluble	Solid	DI Leach	
890-521-10	FS11	Soluble	Solid	DI Leach	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

HPLC/IC (Continued)

Leach Batch: 1811 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-521-11	FS12	Soluble	Solid	DI Leach	
MB 880-1811/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-1811/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-1811/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-521-2 MS	SW03	Soluble	Solid	DI Leach	
890-521-2 MSD	SW03	Soluble	Solid	DI Leach	

Analysis Batch: 1824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-521-1	SW02	Soluble	Solid	300.0	1811
890-521-2	SW03	Soluble	Solid	300.0	1811
890-521-3	SW04	Soluble	Solid	300.0	1811
890-521-4	FS03	Soluble	Solid	300.0	1811
890-521-5	FS06	Soluble	Solid	300.0	1811
890-521-6	FS07	Soluble	Solid	300.0	1811
890-521-7	FS08	Soluble	Solid	300.0	1811
890-521-8	FS09	Soluble	Solid	300.0	1811
890-521-9	FS10	Soluble	Solid	300.0	1811
890-521-10	FS11	Soluble	Solid	300.0	1811
890-521-11	FS12	Soluble	Solid	300.0	1811
MB 880-1811/1-A	Method Blank	Soluble	Solid	300.0	1811
LCS 880-1811/2-A	Lab Control Sample	Soluble	Solid	300.0	1811
LCSD 880-1811/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	1811
890-521-2 MS	SW03	Soluble	Solid	300.0	1811
890-521-2 MSD	SW03	Soluble	Solid	300.0	1811

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

Client Sample ID: SW02

Date Collected: 04/13/21 10:30

Date Received: 04/14/21 09:55

Lab Sample ID: 890-521-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1801	04/14/21 14:40	MR	XM
Total/NA	Analysis	8021B		1	1799	04/14/21 18:05	MR	XM
Total/NA	Prep	8015NM Prep			1813	04/15/21 08:24	DM	XM
Total/NA	Analysis	8015B NM		1	1820	04/16/21 08:00	AJ	XM
Soluble	Leach	DI Leach			1811	04/14/21 18:34	SC	XM
Soluble	Analysis	300.0		1	1824	04/15/21 12:16	CH	XM

Client Sample ID: SW03

Date Collected: 04/13/21 11:00

Date Received: 04/14/21 09:55

Lab Sample ID: 890-521-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1801	04/14/21 14:40	MR	XM
Total/NA	Analysis	8021B		1	1799	04/14/21 18:25	MR	XM
Total/NA	Prep	8015NM Prep			1802	04/14/21 14:55	DM	XM
Total/NA	Analysis	8015B NM		1	1775	04/14/21 23:12	AJ	XM
Soluble	Leach	DI Leach			1811	04/14/21 18:34	SC	XM
Soluble	Analysis	300.0		1	1824	04/15/21 12:22	CH	XM

Client Sample ID: SW04

Date Collected: 04/13/21 10:00

Date Received: 04/14/21 09:55

Lab Sample ID: 890-521-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1801	04/14/21 14:40	MR	XM
Total/NA	Analysis	8021B		1	1799	04/14/21 18:46	MR	XM
Total/NA	Prep	8015NM Prep			1802	04/14/21 14:55	DM	XM
Total/NA	Analysis	8015B NM		1	1775	04/14/21 23:33	AJ	XM
Soluble	Leach	DI Leach			1811	04/14/21 18:34	SC	XM
Soluble	Analysis	300.0		1	1824	04/15/21 12:38	CH	XM

Client Sample ID: FS03

Date Collected: 04/13/21 13:42

Date Received: 04/14/21 09:55

Lab Sample ID: 890-521-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1801	04/14/21 14:40	MR	XM
Total/NA	Analysis	8021B		1	1799	04/14/21 19:06	MR	XM
Total/NA	Prep	8015NM Prep			1802	04/14/21 14:55	DM	XM
Total/NA	Analysis	8015B NM		1	1775	04/14/21 23:54	AJ	XM
Soluble	Leach	DI Leach			1811	04/14/21 18:34	SC	XM
Soluble	Analysis	300.0		1	1824	04/15/21 12:44	CH	XM

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

Client Sample ID: FS06

Date Collected: 04/13/21 13:51

Date Received: 04/14/21 09:55

Lab Sample ID: 890-521-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1801	04/14/21 14:40	MR	XM
Total/NA	Analysis	8021B		1	1799	04/14/21 19:26	MR	XM
Total/NA	Prep	8015NM Prep			1802	04/14/21 14:55	DM	XM
Total/NA	Analysis	8015B NM		1	1775	04/15/21 00:15	AJ	XM
Soluble	Leach	DI Leach			1811	04/14/21 18:34	SC	XM
Soluble	Analysis	300.0		1	1824	04/15/21 13:00	CH	XM

Client Sample ID: FS07

Date Collected: 04/13/21 11:18

Date Received: 04/14/21 09:55

Lab Sample ID: 890-521-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1801	04/14/21 14:40	MR	XM
Total/NA	Analysis	8021B		1	1799	04/14/21 19:47	MR	XM
Total/NA	Prep	8015NM Prep			1802	04/14/21 14:55	DM	XM
Total/NA	Analysis	8015B NM		1	1775	04/15/21 00:36	AJ	XM
Soluble	Leach	DI Leach			1811	04/14/21 18:34	SC	XM
Soluble	Analysis	300.0		1	1824	04/15/21 13:06	CH	XM

Client Sample ID: FS08

Date Collected: 04/13/21 11:20

Date Received: 04/14/21 09:55

Lab Sample ID: 890-521-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1801	04/14/21 14:40	MR	XM
Total/NA	Analysis	8021B		1	1799	04/14/21 20:07	MR	XM
Total/NA	Prep	8015NM Prep			1802	04/14/21 14:55	DM	XM
Total/NA	Analysis	8015B NM		1	1775	04/15/21 00:56	AJ	XM
Soluble	Leach	DI Leach			1811	04/14/21 18:34	SC	XM
Soluble	Analysis	300.0		1	1824	04/15/21 13:11	CH	XM

Client Sample ID: FS09

Date Collected: 04/13/21 11:23

Date Received: 04/14/21 09:55

Lab Sample ID: 890-521-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1801	04/14/21 14:40	MR	XM
Total/NA	Analysis	8021B		1	1799	04/14/21 20:28	MR	XM
Total/NA	Prep	8015NM Prep			1802	04/14/21 14:55	DM	XM
Total/NA	Analysis	8015B NM		1	1775	04/15/21 01:17	AJ	XM
Soluble	Leach	DI Leach			1811	04/14/21 18:34	SC	XM
Soluble	Analysis	300.0		1	1824	04/15/21 13:17	CH	XM

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

Client Sample ID: FS10

Lab Sample ID: 890-521-9

Date Collected: 04/13/21 11:26

Matrix: Solid

Date Received: 04/14/21 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1801	04/14/21 14:40	MR	XM
Total/NA	Analysis	8021B		1	1799	04/14/21 20:48	MR	XM
Total/NA	Prep	8015NM Prep			1802	04/14/21 14:55	DM	XM
Total/NA	Analysis	8015B NM		1	1775	04/15/21 01:38	AJ	XM
Soluble	Leach	DI Leach			1811	04/14/21 18:34	SC	XM
Soluble	Analysis	300.0		1	1824	04/15/21 13:22	CH	XM

Client Sample ID: FS11

Lab Sample ID: 890-521-10

Date Collected: 04/13/21 11:28

Matrix: Solid

Date Received: 04/14/21 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1801	04/14/21 14:40	MR	XM
Total/NA	Analysis	8021B		1	1799	04/14/21 21:08	MR	XM
Total/NA	Prep	8015NM Prep			1802	04/14/21 14:55	DM	XM
Total/NA	Analysis	8015B NM		1	1775	04/15/21 01:59	AJ	XM
Soluble	Leach	DI Leach			1811	04/14/21 18:34	SC	XM
Soluble	Analysis	300.0		1	1824	04/15/21 13:28	CH	XM

Client Sample ID: FS12

Lab Sample ID: 890-521-11

Date Collected: 04/13/21 11:29

Matrix: Solid

Date Received: 04/14/21 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1801	04/14/21 14:40	MR	XM
Total/NA	Analysis	8021B		1	1799	04/14/21 23:39	MR	XM
Total/NA	Prep	8015NM Prep			1802	04/14/21 14:55	DM	XM
Total/NA	Analysis	8015B NM		1	1775	04/15/21 02:41	AJ	XM
Soluble	Leach	DI Leach			1811	04/14/21 18:34	SC	XM
Soluble	Analysis	300.0		1	1824	04/15/21 13:34	CH	XM

Laboratory References:

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

Eurofins Xenco, Carlsbad

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-521-1	SW02	Solid	04/13/21 10:30	04/14/21 09:55	0 - 4
890-521-2	SW03	Solid	04/13/21 11:00	04/14/21 09:55	0 - 4
890-521-3	SW04	Solid	04/13/21 10:00	04/14/21 09:55	0 - 4
890-521-4	FS03	Solid	04/13/21 13:42	04/14/21 09:55	4 - 7
890-521-5	FS06	Solid	04/13/21 13:51	04/14/21 09:55	2 - 5
890-521-6	FS07	Solid	04/13/21 11:18	04/14/21 09:55	- 4
890-521-7	FS08	Solid	04/13/21 11:20	04/14/21 09:55	- 4
890-521-8	FS09	Solid	04/13/21 11:23	04/14/21 09:55	- 4
890-521-9	FS10	Solid	04/13/21 11:26	04/14/21 09:55	- 4
890-521-10	FS11	Solid	04/13/21 11:28	04/14/21 09:55	- 4
890-521-11	FS12	Solid	04/13/21 11:29	04/14/21 09:55	- 4

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-521-1
SDG Number: Eddy County

Login Number: 521
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-521-1
SDG Number: Eddy County

Login Number: 521
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 04/14/21 02:38 PM

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

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-538-1
Laboratory Sample Delivery Group: Eddy
Client Project/Site: JRU D11 - TE012919259

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

Attn: Dan Moir

Authorized for release by:
4/21/2021 7:46:11 PM

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



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

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

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Client: WSP USA Inc.
Project/Site: JRU DI1 - TE012919259

Laboratory Job ID: 890-538-1
SDG: Eddy

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU D11 - TE012919259

Job ID: 890-538-1
SDG: Eddy

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI1 - TE012919259

Job ID: 890-538-1
SDG: Eddy

Job ID: 890-538-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-538-1

Receipt

The samples were received on 4/19/2021 8:00 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 7.0°C

Receipt Exceptions

The following samples analyzed for method <FRACTION_METHOD> were received and analyzed from an unpreserved bulk soil jar: LN-SW01 (890-538-1), LN-SW02 (890-538-2) and LN-SW03 (890-538-3).
BTEX8021

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.

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Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU D11 - TE012919259

Job ID: 890-538-1
SDG: Eddy

Client Sample ID: LN-SW01

Lab Sample ID: 890-538-1

Date Collected: 04/16/21 15:35

Matrix: Solid

Date Received: 04/19/21 08:00

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/19/21 15:44	04/20/21 11:11	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/19/21 15:44	04/20/21 11:11	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/19/21 15:44	04/20/21 11:11	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/19/21 15:44	04/20/21 11:11	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/19/21 15:44	04/20/21 11:11	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/19/21 15:44	04/20/21 11:11	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		04/19/21 15:44	04/20/21 11:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	147	S1+	70 - 130	04/19/21 15:44	04/20/21 11:11	1
1,4-Difluorobenzene (Surr)	109		70 - 130	04/19/21 15:44	04/20/21 11:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/19/21 14:03	04/20/21 08:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U F1	49.9	mg/Kg		04/19/21 14:03	04/20/21 08:56	1
Oil Range Organics (Over C28-C36)	55.8	B	49.9	mg/Kg		04/19/21 14:03	04/20/21 08:56	1
Total TPH	55.8	B F1	49.9	mg/Kg		04/19/21 14:03	04/20/21 08:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	127		70 - 130	04/19/21 14:03	04/20/21 08:56	1
o-Terphenyl	149	S1+	70 - 130	04/19/21 14:03	04/20/21 08:56	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	321	F1	25.0	mg/Kg			04/21/21 10:24	5

Client Sample ID: LN-SW02

Lab Sample ID: 890-538-2

Date Collected: 04/16/21 15:40

Matrix: Solid

Date Received: 04/19/21 08:00

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/19/21 15:44	04/20/21 11:37	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/19/21 15:44	04/20/21 11:37	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/19/21 15:44	04/20/21 11:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/19/21 15:44	04/20/21 11:37	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/19/21 15:44	04/20/21 11:37	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/19/21 15:44	04/20/21 11:37	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		04/19/21 15:44	04/20/21 11:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	143	S1+	70 - 130	04/19/21 15:44	04/20/21 11:37	1
1,4-Difluorobenzene (Surr)	106		70 - 130	04/19/21 15:44	04/20/21 11:37	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1 - TE012919259

Job ID: 890-538-1
SDG: Eddy

Client Sample ID: LN-SW02

Lab Sample ID: 890-538-2

Date Collected: 04/16/21 15:40

Matrix: Solid

Date Received: 04/19/21 08:00

Sample Depth: 0 - 4

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/19/21 14:03	04/20/21 10:00	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/19/21 14:03	04/20/21 10:00	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/19/21 14:03	04/20/21 10:00	1
Total TPH	<49.9	U	49.9	mg/Kg		04/19/21 14:03	04/20/21 10:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	131	S1+	70 - 130	04/19/21 14:03	04/20/21 10:00	1
o-Terphenyl	153	S1+	70 - 130	04/19/21 14:03	04/20/21 10:00	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	463		4.98	mg/Kg			04/21/21 14:01	1

Client Sample ID: LN-SW03

Lab Sample ID: 890-538-3

Date Collected: 04/16/21 15:30

Matrix: Solid

Date Received: 04/19/21 08:00

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/19/21 15:44	04/20/21 12:02	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/19/21 15:44	04/20/21 12:02	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/19/21 15:44	04/20/21 12:02	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/19/21 15:44	04/20/21 12:02	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/19/21 15:44	04/20/21 12:02	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/19/21 15:44	04/20/21 12:02	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		04/19/21 15:44	04/20/21 12:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	130		70 - 130	04/19/21 15:44	04/20/21 12:02	1
1,4-Difluorobenzene (Surr)	100		70 - 130	04/19/21 15:44	04/20/21 12:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		04/19/21 14:03	04/20/21 10:22	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		04/19/21 14:03	04/20/21 10:22	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		04/19/21 14:03	04/20/21 10:22	1
Total TPH	<49.8	U	49.8	mg/Kg		04/19/21 14:03	04/20/21 10:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	117		70 - 130	04/19/21 14:03	04/20/21 10:22	1
o-Terphenyl	146	S1+	70 - 130	04/19/21 14:03	04/20/21 10:22	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	276		4.96	mg/Kg			04/21/21 14:06	1

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 - TE012919259

Job ID: 890-538-1
SDG: Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-538-1	LN-SW01	147 S1+	109
890-538-2	LN-SW02	143 S1+	106
890-538-3	LN-SW03	130	100
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-538-1	LN-SW01	127	149 S1+
890-538-1 MS	LN-SW01	147 S1+	157 S1+
890-538-1 MSD	LN-SW01	140 S1+	143 S1+
890-538-2	LN-SW02	131 S1+	153 S1+
890-538-3	LN-SW03	117	146 S1+
LCS 880-1998/2-A	Lab Control Sample	123	115
LCSD 880-1998/3-A	Lab Control Sample Dup	121	107
MB 880-1998/1-A	Method Blank	113	111
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: WSP USA Inc.
 Project/Site: JRU D11 - TE012919259

Job ID: 890-538-1
 SDG: Eddy

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

Lab Sample ID: MB 880-1998/1-A
 Matrix: Solid
 Analysis Batch: 1967

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 1998

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/19/21 14:03	04/20/21 07:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/19/21 14:03	04/20/21 07:51	1
Oll Range Organics (Over C28-C36)	104.0		50.0	mg/Kg		04/19/21 14:03	04/20/21 07:51	1
Total TPH	104.0		50.0	mg/Kg		04/19/21 14:03	04/20/21 07:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130	04/19/21 14:03	04/20/21 07:51	1
o-Terphenyl	111		70 - 130	04/19/21 14:03	04/20/21 07:51	1

Lab Sample ID: LCS 880-1998/2-A
 Matrix: Solid
 Analysis Batch: 1967

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 1998

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1142		mg/Kg		114	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1057		mg/Kg		106	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	123		70 - 130
o-Terphenyl	115		70 - 130

Lab Sample ID: LCSD 880-1998/3-A
 Matrix: Solid
 Analysis Batch: 1967

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 1998

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1177		mg/Kg		118	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	958.0		mg/Kg		96	70 - 130	10	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	107		70 - 130

Lab Sample ID: 890-538-1 MS
 Matrix: Solid
 Analysis Batch: 1967

Client Sample ID: LN-SW01
 Prep Type: Total/NA
 Prep Batch: 1998

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1205		mg/Kg		119	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1	998	1438	F1	mg/Kg		142	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1 - TE012919259

Job ID: 890-538-1
SDG: Eddy

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

Lab Sample ID: 890-538-1 MS
Matrix: Solid
Analysis Batch: 1967

Client Sample ID: LN-SW01
Prep Type: Total/NA
Prep Batch: 1998

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	147	S1+	70 - 130
o-Terphenyl	157	S1+	70 - 130

Lab Sample ID: 890-538-1 MSD
Matrix: Solid
Analysis Batch: 1967

Client Sample ID: LN-SW01
Prep Type: Total/NA
Prep Batch: 1998

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1216		mg/Kg		120	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	998	1338	F1	mg/Kg		132	70 - 130	7	20

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	140	S1+	70 - 130
o-Terphenyl	143	S1+	70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2055/1-A
Matrix: Solid
Analysis Batch: 2094

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Chloride	<5.00	U	5.00	mg/Kg			04/21/21 08:58	1

Lab Sample ID: LCS 880-2055/2-A
Matrix: Solid
Analysis Batch: 2094

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Chloride	250	271.5		mg/Kg		109	90 - 110

Lab Sample ID: LCSD 880-2055/3-A
Matrix: Solid
Analysis Batch: 2094

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

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	Limit
		Result	Qualifier				Limits		
Chloride	250	265.2		mg/Kg		106	90 - 110	2	20

Lab Sample ID: 890-538-1 MS
Matrix: Solid
Analysis Batch: 2094

Client Sample ID: LN-SW01
Prep Type: Soluble

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Chloride	321	F1	250	1525	F1	mg/Kg		481	90 - 110

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1 - TE012919259

Job ID: 890-538-1
SDG: Eddy

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-538-1 MSD
Matrix: Solid
Analysis Batch: 2094

Client Sample ID: LN-SW01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	321	F1	250	1578	F1	mg/Kg		503	90 - 110	3	20

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 - TE012919259

Job ID: 890-538-1
SDG: Eddy

GC VOA

Analysis Batch: 1973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-538-1	LN-SW01	Total/NA	Solid	8021B	2005
890-538-2	LN-SW02	Total/NA	Solid	8021B	2005
890-538-3	LN-SW03	Total/NA	Solid	8021B	2005

Prep Batch: 2005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-538-1	LN-SW01	Total/NA	Solid	5035	
890-538-2	LN-SW02	Total/NA	Solid	5035	
890-538-3	LN-SW03	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 1967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-538-1	LN-SW01	Total/NA	Solid	8015B NM	1998
890-538-2	LN-SW02	Total/NA	Solid	8015B NM	1998
890-538-3	LN-SW03	Total/NA	Solid	8015B NM	1998
MB 880-1998/1-A	Method Blank	Total/NA	Solid	8015B NM	1998
LCS 880-1998/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	1998
LCSD 880-1998/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	1998
890-538-1 MS	LN-SW01	Total/NA	Solid	8015B NM	1998
890-538-1 MSD	LN-SW01	Total/NA	Solid	8015B NM	1998

Prep Batch: 1998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-538-1	LN-SW01	Total/NA	Solid	8015NM Prep	
890-538-2	LN-SW02	Total/NA	Solid	8015NM Prep	
890-538-3	LN-SW03	Total/NA	Solid	8015NM Prep	
MB 880-1998/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-1998/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-1998/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-538-1 MS	LN-SW01	Total/NA	Solid	8015NM Prep	
890-538-1 MSD	LN-SW01	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 2055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-538-1	LN-SW01	Soluble	Solid	DI Leach	
890-538-2	LN-SW02	Soluble	Solid	DI Leach	
890-538-3	LN-SW03	Soluble	Solid	DI Leach	
MB 880-2055/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2055/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2055/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-538-1 MS	LN-SW01	Soluble	Solid	DI Leach	
890-538-1 MSD	LN-SW01	Soluble	Solid	DI Leach	

Analysis Batch: 2094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-538-1	LN-SW01	Soluble	Solid	300.0	2055
890-538-2	LN-SW02	Soluble	Solid	300.0	2055
890-538-3	LN-SW03	Soluble	Solid	300.0	2055

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 - TE012919259

Job ID: 890-538-1
SDG: Eddy

HPLC/IC (Continued)

Analysis Batch: 2094 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-2055/1-A	Method Blank	Soluble	Solid	300.0	2055
LCS 880-2055/2-A	Lab Control Sample	Soluble	Solid	300.0	2055
LCSD 880-2055/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2055
890-538-1 MS	LN-SW01	Soluble	Solid	300.0	2055
890-538-1 MSD	LN-SW01	Soluble	Solid	300.0	2055

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Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1 - TE012919259

Job ID: 890-538-1
SDG: Eddy

Client Sample ID: LN-SW01

Lab Sample ID: 890-538-1

Date Collected: 04/16/21 15:35

Matrix: Solid

Date Received: 04/19/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2005	04/19/21 15:44	MR	XM
Total/NA	Analysis	8021B		1	1973	04/20/21 11:11	MR	XM
Total/NA	Prep	8015NM Prep			1998	04/19/21 14:03	DM	XM
Total/NA	Analysis	8015B NM		1	1967	04/20/21 08:56	AJ	XM
Soluble	Leach	DI Leach			2055	04/20/21 15:27	CH	XM
Soluble	Analysis	300.0		5	2094	04/21/21 10:24	CH	XM

Client Sample ID: LN-SW02

Lab Sample ID: 890-538-2

Date Collected: 04/16/21 15:40

Matrix: Solid

Date Received: 04/19/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2005	04/19/21 15:44	MR	XM
Total/NA	Analysis	8021B		1	1973	04/20/21 11:37	MR	XM
Total/NA	Prep	8015NM Prep			1998	04/19/21 14:03	DM	XM
Total/NA	Analysis	8015B NM		1	1967	04/20/21 10:00	AJ	XM
Soluble	Leach	DI Leach			2055	04/20/21 15:27	CH	XM
Soluble	Analysis	300.0		1	2094	04/21/21 14:01	CH	XM

Client Sample ID: LN-SW03

Lab Sample ID: 890-538-3

Date Collected: 04/16/21 15:30

Matrix: Solid

Date Received: 04/19/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2005	04/19/21 15:44	MR	XM
Total/NA	Analysis	8021B		1	1973	04/20/21 12:02	MR	XM
Total/NA	Prep	8015NM Prep			1998	04/19/21 14:03	DM	XM
Total/NA	Analysis	8015B NM		1	1967	04/20/21 10:22	AJ	XM
Soluble	Leach	DI Leach			2055	04/20/21 15:27	CH	XM
Soluble	Analysis	300.0		1	2094	04/21/21 14:06	CH	XM

Laboratory References:

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

Eurofins Xenco, Carlsbad

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 - TE012919259

Job ID: 890-538-1
SDG: Eddy

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

- 1
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- 10
- 11
- 12
- 13
- 14

Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 - TE012919259

Job ID: 890-538-1
SDG: Eddy

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI1 - TE012919259

Job ID: 890-538-1
SDG: Eddy

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-538-1	LN-SW01	Solid	04/16/21 15:35	04/19/21 08:00	0 - 4
890-538-2	LN-SW02	Solid	04/16/21 15:40	04/19/21 08:00	0 - 4
890-538-3	LN-SW03	Solid	04/16/21 15:30	04/19/21 08:00	0 - 4

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Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432-704-5440) El Paso, TX (915)585-3443 Lubbock, TX (806)794-1296
 Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-4800) Tampa, FL (813-620-2000)

Chain of Custody

Work Order No: _____

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littlell
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carsbad, NM 88220
Phone:	(432) 236-3849	Email:	jeremy.hill@wsp.com Dan.Moir@wsp.com

Program: UST/PST	<input type="checkbox"/> RP	<input type="checkbox"/> Groundfields	<input type="checkbox"/> RC	<input type="checkbox"/> Perfund
State of Project:				
Reporting Level II	<input type="checkbox"/> Level III	<input type="checkbox"/> ST/UST	<input type="checkbox"/> RP	<input type="checkbox"/> Level IV
Deliverables: EDD	<input type="checkbox"/>	ADAPT	<input type="checkbox"/>	Other:

Project Name:	JRU DI 1	Turn Around	
Project Number:	TE 612919259	Routine	<input type="checkbox"/>
P.O. Number:	EDL	Rush:	24 hr
Sampler's Name:	Jeremy Hill	Due Date:	
SAMPLE RECEIPT	Temp Blank: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Wet Ice: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Temperature (°C):	7.2/7.0	Thermometer ID	ZNM007
Received Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Correction Factor:	-0.2
Cooler Custody Seals:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Total Containers:	
Sample Custody Seals:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		



Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	Sample Comments
LN-Su01	S	4/16/21	1535	0-2'	1	X	X	X	Composite
LN-Su02	S	4/16/21	1540	↓	1	X	X	X	
LN-Su03	S	4/16/21	1530	↓	1	X	X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631/245,177470/17471.Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	4.19.21	<i>[Signature]</i>	<i>[Signature]</i>	08:00

Chain of Custody Record



Environment Testing America

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

Client Information (Sub Contract Lab)

Client Contact: _____
 Shipping/Receiving _____
 Company Eurofins Xenco
 Address 1211 W Florida Ave,
 City Midland
 State, Zip TX, 79701
 Phone 432-704-5440(Tel)
 Email _____

Sampler Kramer, Jessica
 Phone: _____
 E-Mail jessica.kramer@eurofinsnet.com

Accreditations Required (See note)
 NELAP - Louisiana NELAP - Texas

Carrier Tracking No(s): _____
 State of Origin New Mexico

COC No: 890-172-1
 Page: Page 1 of 1
 Job #: 890-538-1

Due Date Requested 4/20/2021
 TAT Requested (days)

PO #: _____
 WOC #: _____
 Project #: 89000004
 SSOV#: _____

Analysis Requested

Field Filtered Sample (Yes or No)
 Perform MS/MSD (Yes or No)

Preservation Codes
 A HCl M Hexane
 B NaOH N None
 C Zn Acetate O AsNcO2
 D Nitric Acid P Na2O4S
 E NaHSO4 Q Na2SO3
 F MeOH R Na2S2O3
 G Amchlor S H2SO4
 H - Ascorbic Acid T TSP Dodecylhydrate
 I Ice U Acetone
 J DI Water V MCAA
 K EDTA W, pH 4-5
 L EDTA Z other (specify)
 Other _____

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=oil, B=issue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Special Instructions/Note
LN-SW01 (890-538-1)	4/16/21	15 35	Mountain	Solid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	8015MOD_NM/8015NM_S_Prep Full TPH	
LN-SW02 (890-538-2)	4/16/21	15 40	Mountain	Solid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	300_ORGFM_28D/DI_LEACH Chloride	
LN-SW03 (890-538-3)	4/16/21	15 30	Mountain	Solid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	8021B/6035FP_Calc BTEX	
					Total Number of containers			

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

Possible Hazard Identification

Deliverable Requested I II III IV Other (specify) _____
 Primary Deliverable Rank 2
 Special Instructions/QC Requirements: _____

Empty Kit Relinquished by _____ Date _____
 Relinquished by *Joe Coffey* 4/19/21 Date/Time _____ Company _____

Relinquished by _____ Date/Time _____ Company _____
 Received by _____ Date/Time _____ Company _____

Relinquished by _____ Date/Time _____ Company _____
 Received by _____ Date/Time _____ Company _____

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-538-1

SDG Number: Eddy

Login Number: 538

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-538-1

SDG Number: Eddy

Login Number: 538

List Number: 2

Creator: Copeland, Tatiana

List Source: Eurofins Midland

List Creation: 04/19/21 01:23 PM

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

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-542-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI 1

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

Attn: Dan Moir

Authorized for release by:
4/21/2021 7:48:35 PM

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



LINKS

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results through
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www.eurofinsus.com/Env

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

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

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Client: WSP USA Inc.
Project/Site: JRU DI 1

Laboratory Job ID: 890-542-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-542-1
SDG: TE012919259

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high 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
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-542-1
SDG: TE012919259

Job ID: 890-542-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-542-1

Comments

No additional comments.

Receipt

The samples were received on 4/20/2021 11:05 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 was 2.8° C.

GC VOA

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

GC Semi VOA

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

General Chemistry

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

Organic Prep

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

VOA Prep

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

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Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-542-1
SDG: TE012919259

Client Sample ID: LN-SW04

Lab Sample ID: 890-542-1

Date Collected: 04/19/21 13:00

Matrix: Solid

Date Received: 04/20/21 11:05

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/21/21 10:10	04/21/21 13:57	1
Toluene	0.00329		0.00200	mg/Kg		04/21/21 10:10	04/21/21 13:57	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/21/21 10:10	04/21/21 13:57	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/21/21 10:10	04/21/21 13:57	1
o-Xylene	0.00243		0.00200	mg/Kg		04/21/21 10:10	04/21/21 13:57	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/21/21 10:10	04/21/21 13:57	1
Total BTEX	0.00572		0.00399	mg/Kg		04/21/21 10:10	04/21/21 13:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130	04/21/21 10:10	04/21/21 13:57	1
1,4-Difluorobenzene (Surr)	101		70 - 130	04/21/21 10:10	04/21/21 13:57	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/21/21 10:48	04/21/21 17:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/21/21 10:48	04/21/21 17:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/21/21 10:48	04/21/21 17:00	1
Total TPH	<50.0	U	50.0	mg/Kg		04/21/21 10:48	04/21/21 17:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	04/21/21 10:48	04/21/21 17:00	1
o-Terphenyl	117		70 - 130	04/21/21 10:48	04/21/21 17:00	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.6		5.01	mg/Kg			04/21/21 11:30	1

Client Sample ID: LN-SW05

Lab Sample ID: 890-542-2

Date Collected: 04/19/21 14:00

Matrix: Solid

Date Received: 04/20/21 11:05

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		04/21/21 10:10	04/21/21 14:17	1
Toluene	<0.00198	U	0.00198	mg/Kg		04/21/21 10:10	04/21/21 14:17	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		04/21/21 10:10	04/21/21 14:17	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		04/21/21 10:10	04/21/21 14:17	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		04/21/21 10:10	04/21/21 14:17	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		04/21/21 10:10	04/21/21 14:17	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		04/21/21 10:10	04/21/21 14:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	04/21/21 10:10	04/21/21 14:17	1
1,4-Difluorobenzene (Surr)	99		70 - 130	04/21/21 10:10	04/21/21 14:17	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-542-1
SDG: TE012919259

Client Sample ID: LN-SW05

Lab Sample ID: 890-542-2

Date Collected: 04/19/21 14:00

Matrix: Solid

Date Received: 04/20/21 11:05

Sample Depth: 0 - 4

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/21/21 10:48	04/21/21 17:21	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/21/21 10:48	04/21/21 17:21	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/21/21 10:48	04/21/21 17:21	1
Total TPH	<49.9	U	49.9	mg/Kg		04/21/21 10:48	04/21/21 17:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	04/21/21 10:48	04/21/21 17:21	1
o-Terphenyl	124		70 - 130	04/21/21 10:48	04/21/21 17:21	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	169		25.2	mg/Kg			04/21/21 17:10	5

Client Sample ID: LN-SW06

Lab Sample ID: 890-542-3

Date Collected: 04/19/21 15:50

Matrix: Solid

Date Received: 04/20/21 11:05

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/21/21 10:10	04/21/21 14:38	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/21/21 10:10	04/21/21 14:38	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/21/21 10:10	04/21/21 14:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/21/21 10:10	04/21/21 14:38	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/21/21 10:10	04/21/21 14:38	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/21/21 10:10	04/21/21 14:38	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		04/21/21 10:10	04/21/21 14:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	04/21/21 10:10	04/21/21 14:38	1
1,4-Difluorobenzene (Surr)	90		70 - 130	04/21/21 10:10	04/21/21 14:38	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1	mg/Kg		04/21/21 10:48	04/21/21 17:42	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1	mg/Kg		04/21/21 10:48	04/21/21 17:42	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		04/21/21 10:48	04/21/21 17:42	1
Total TPH	<50.1	U	50.1	mg/Kg		04/21/21 10:48	04/21/21 17:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130	04/21/21 10:48	04/21/21 17:42	1
o-Terphenyl	128		70 - 130	04/21/21 10:48	04/21/21 17:42	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.4		4.98	mg/Kg			04/21/21 17:16	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-542-1
SDG: TE012919259

Client Sample ID: LN-SW07

Lab Sample ID: 890-542-4

Date Collected: 04/19/21 16:00

Matrix: Solid

Date Received: 04/20/21 11:05

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/21/21 10:10	04/21/21 14:58	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/21/21 10:10	04/21/21 14:58	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/21/21 10:10	04/21/21 14:58	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/21/21 10:10	04/21/21 14:58	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/21/21 10:10	04/21/21 14:58	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/21/21 10:10	04/21/21 14:58	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		04/21/21 10:10	04/21/21 14:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	04/21/21 10:10	04/21/21 14:58	1
1,4-Difluorobenzene (Surr)	96		70 - 130	04/21/21 10:10	04/21/21 14:58	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1	mg/Kg		04/21/21 10:48	04/21/21 18:03	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1	mg/Kg		04/21/21 10:48	04/21/21 18:03	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		04/21/21 10:48	04/21/21 18:03	1
Total TPH	<50.1	U	50.1	mg/Kg		04/21/21 10:48	04/21/21 18:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130	04/21/21 10:48	04/21/21 18:03	1
o-Terphenyl	133	S1+	70 - 130	04/21/21 10:48	04/21/21 18:03	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	401		25.0	mg/Kg			04/21/21 17:31	5

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-542-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-542-1	LN-SW04	118	101
890-542-2	LN-SW05	105	99
890-542-3	LN-SW06	113	90
890-542-4	LN-SW07	104	96
LCS 880-2085/1-A	Lab Control Sample	105	101
LCSD 880-2085/2-A	Lab Control Sample Dup	107	102
MB 880-2085/5-A	Method Blank	87	92

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-542-1	LN-SW04	102	117
890-542-2	LN-SW05	106	124
890-542-3	LN-SW06	112	128
890-542-4	LN-SW07	112	133 S1+
LCS 880-2030/2-A	Lab Control Sample	108	114
LCSD 880-2030/3-A	Lab Control Sample Dup	108	116
MB 880-2030/1-A	Method Blank	102	119

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-542-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2085/5-A
Matrix: Solid
Analysis Batch: 2084

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2085

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		04/21/21 10:10	04/21/21 13:15	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/21/21 10:10	04/21/21 13:15	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/21/21 10:10	04/21/21 13:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/21/21 10:10	04/21/21 13:15	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/21/21 10:10	04/21/21 13:15	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/21/21 10:10	04/21/21 13:15	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		04/21/21 10:10	04/21/21 13:15	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	87		70 - 130	04/21/21 10:10	04/21/21 13:15	1
1,4-Difluorobenzene (Surr)	92		70 - 130	04/21/21 10:10	04/21/21 13:15	1

Lab Sample ID: LCS 880-2085/1-A
Matrix: Solid
Analysis Batch: 2084

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2085

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Benzene	0.100	0.09845		mg/Kg		98	70 - 130
Toluene	0.100	0.09288		mg/Kg		93	70 - 130
Ethylbenzene	0.100	0.09542		mg/Kg		95	70 - 130
m-Xylene & p-Xylene	0.200	0.2038		mg/Kg		102	70 - 130
o-Xylene	0.100	0.1007		mg/Kg		101	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: LCSD 880-2085/2-A
Matrix: Solid
Analysis Batch: 2084

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2085

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec. Limits	RPD	
		Result	Qualifier					RPD	Limit
Benzene	0.100	0.1068		mg/Kg		107	70 - 130	8	35
Toluene	0.100	0.1020		mg/Kg		102	70 - 130	9	35
Ethylbenzene	0.100	0.1049		mg/Kg		105	70 - 130	9	35
m-Xylene & p-Xylene	0.200	0.2247		mg/Kg		112	70 - 130	10	35
o-Xylene	0.100	0.1116		mg/Kg		112	70 - 130	10	35

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-542-1
SDG: TE012919259

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

Lab Sample ID: MB 880-2030/1-A
Matrix: Solid
Analysis Batch: 2089

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2030

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/20/21 10:48	04/21/21 15:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/20/21 10:48	04/21/21 15:58	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/20/21 10:48	04/21/21 15:58	1
Total TPH	<50.0	U	50.0	mg/Kg		04/20/21 10:48	04/21/21 15:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	04/20/21 10:48	04/21/21 15:58	1
o-Terphenyl	119		70 - 130	04/20/21 10:48	04/21/21 15:58	1

Lab Sample ID: LCS 880-2030/2-A
Matrix: Solid
Analysis Batch: 2089

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2030

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1210		mg/Kg		121	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1177		mg/Kg		118	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	114		70 - 130

Lab Sample ID: LCSD 880-2030/3-A
Matrix: Solid
Analysis Batch: 2089

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2030

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1191		mg/Kg		119	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	1183		mg/Kg		118	70 - 130	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	116		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2055/1-A
Matrix: Solid
Analysis Batch: 2094

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/21/21 08:58	1

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-542-1
SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-2055/2-A
Matrix: Solid
Analysis Batch: 2094

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	271.5		mg/Kg		109	90 - 110

Lab Sample ID: LCSD 880-2055/3-A
Matrix: Solid
Analysis Batch: 2094

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	265.2		mg/Kg		106	90 - 110	2	20

Lab Sample ID: MB 880-2096/1-A
Matrix: Solid
Analysis Batch: 2117

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/21/21 15:29	1

Lab Sample ID: LCS 880-2096/2-A
Matrix: Solid
Analysis Batch: 2117

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	253.2		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-2096/3-A
Matrix: Solid
Analysis Batch: 2117

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	259.0		mg/Kg		104	90 - 110	2	20

Lab Sample ID: 890-542-1 MS
Matrix: Solid
Analysis Batch: 2117

Client Sample ID: LN-SW04
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	29.2		250	270.9		mg/Kg		97	90 - 110

Lab Sample ID: 890-542-1 MSD
Matrix: Solid
Analysis Batch: 2117

Client Sample ID: LN-SW04
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	29.2		250	268.5		mg/Kg		96	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-542-1
SDG: TE012919259

GC VOA

Analysis Batch: 2084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-542-1	LN-SW04	Total/NA	Solid	8021B	2085
890-542-2	LN-SW05	Total/NA	Solid	8021B	2085
890-542-3	LN-SW06	Total/NA	Solid	8021B	2085
890-542-4	LN-SW07	Total/NA	Solid	8021B	2085
MB 880-2085/5-A	Method Blank	Total/NA	Solid	8021B	2085
LCS 880-2085/1-A	Lab Control Sample	Total/NA	Solid	8021B	2085
LCSD 880-2085/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2085

Prep Batch: 2085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-542-1	LN-SW04	Total/NA	Solid	5035	
890-542-2	LN-SW05	Total/NA	Solid	5035	
890-542-3	LN-SW06	Total/NA	Solid	5035	
890-542-4	LN-SW07	Total/NA	Solid	5035	
MB 880-2085/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2085/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2085/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 2030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-542-1	LN-SW04	Total/NA	Solid	8015NM Prep	
890-542-2	LN-SW05	Total/NA	Solid	8015NM Prep	
890-542-3	LN-SW06	Total/NA	Solid	8015NM Prep	
890-542-4	LN-SW07	Total/NA	Solid	8015NM Prep	
MB 880-2030/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2030/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2030/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 2089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-542-1	LN-SW04	Total/NA	Solid	8015B NM	2030
890-542-2	LN-SW05	Total/NA	Solid	8015B NM	2030
890-542-3	LN-SW06	Total/NA	Solid	8015B NM	2030
890-542-4	LN-SW07	Total/NA	Solid	8015B NM	2030
MB 880-2030/1-A	Method Blank	Total/NA	Solid	8015B NM	2030
LCS 880-2030/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2030
LCSD 880-2030/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2030

HPLC/IC

Leach Batch: 2055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-542-1	LN-SW04	Soluble	Solid	DI Leach	
MB 880-2055/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2055/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2055/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 2094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-542-1	LN-SW04	Soluble	Solid	300.0	2055

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-542-1
SDG: TE012919259

HPLC/IC (Continued)

Analysis Batch: 2094 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-2055/1-A	Method Blank	Soluble	Solid	300.0	2055
LCS 880-2055/2-A	Lab Control Sample	Soluble	Solid	300.0	2055
LCSD 880-2055/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2055

Leach Batch: 2096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-542-2	LN-SW05	Soluble	Solid	DI Leach	
890-542-3	LN-SW06	Soluble	Solid	DI Leach	
890-542-4	LN-SW07	Soluble	Solid	DI Leach	
MB 880-2096/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2096/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2096/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-542-1 MS	LN-SW04	Soluble	Solid	DI Leach	
890-542-1 MSD	LN-SW04	Soluble	Solid	DI Leach	

Analysis Batch: 2117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-542-2	LN-SW05	Soluble	Solid	300.0	2096
890-542-3	LN-SW06	Soluble	Solid	300.0	2096
890-542-4	LN-SW07	Soluble	Solid	300.0	2096
MB 880-2096/1-A	Method Blank	Soluble	Solid	300.0	2096
LCS 880-2096/2-A	Lab Control Sample	Soluble	Solid	300.0	2096
LCSD 880-2096/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2096
890-542-1 MS	LN-SW04	Soluble	Solid	300.0	2096
890-542-1 MSD	LN-SW04	Soluble	Solid	300.0	2096

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-542-1
SDG: TE012919259

Client Sample ID: LN-SW04

Lab Sample ID: 890-542-1

Date Collected: 04/19/21 13:00

Matrix: Solid

Date Received: 04/20/21 11:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2085	04/21/21 10:10	KL	XM
Total/NA	Analysis	8021B		1	2084	04/21/21 13:57	KL	XM
Total/NA	Prep	8015NM Prep			2030	04/21/21 10:48	DM	XM
Total/NA	Analysis	8015B NM		1	2089	04/21/21 17:00	AJ	XM
Soluble	Leach	DI Leach			2055	04/20/21 15:27	CH	XM
Soluble	Analysis	300.0		1	2094	04/21/21 11:30	CH	XM

Client Sample ID: LN-SW05

Lab Sample ID: 890-542-2

Date Collected: 04/19/21 14:00

Matrix: Solid

Date Received: 04/20/21 11:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2085	04/21/21 10:10	KL	XM
Total/NA	Analysis	8021B		1	2084	04/21/21 14:17	KL	XM
Total/NA	Prep	8015NM Prep			2030	04/21/21 10:48	DM	XM
Total/NA	Analysis	8015B NM		1	2089	04/21/21 17:21	AJ	XM
Soluble	Leach	DI Leach			2096	04/21/21 12:55	CH	XM
Soluble	Analysis	300.0		5	2117	04/21/21 17:10	CH	XM

Client Sample ID: LN-SW06

Lab Sample ID: 890-542-3

Date Collected: 04/19/21 15:50

Matrix: Solid

Date Received: 04/20/21 11:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2085	04/21/21 10:10	KL	XM
Total/NA	Analysis	8021B		1	2084	04/21/21 14:38	KL	XM
Total/NA	Prep	8015NM Prep			2030	04/21/21 10:48	DM	XM
Total/NA	Analysis	8015B NM		1	2089	04/21/21 17:42	AJ	XM
Soluble	Leach	DI Leach			2096	04/21/21 12:55	CH	XM
Soluble	Analysis	300.0		1	2117	04/21/21 17:16	CH	XM

Client Sample ID: LN-SW07

Lab Sample ID: 890-542-4

Date Collected: 04/19/21 16:00

Matrix: Solid

Date Received: 04/20/21 11:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2085	04/21/21 10:10	KL	XM
Total/NA	Analysis	8021B		1	2084	04/21/21 14:58	KL	XM
Total/NA	Prep	8015NM Prep			2030	04/21/21 10:48	DM	XM
Total/NA	Analysis	8015B NM		1	2089	04/21/21 18:03	AJ	XM
Soluble	Leach	DI Leach			2096	04/21/21 12:55	CH	XM
Soluble	Analysis	300.0		5	2117	04/21/21 17:31	CH	XM

Laboratory References:

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

Eurofins Xenco, Carlsbad

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-542-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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

Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-542-1
SDG: TE012919259

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-542-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-542-1	LN-SW04	Solid	04/19/21 13:00	04/20/21 11:05	0 - 4
890-542-2	LN-SW05	Solid	04/19/21 14:00	04/20/21 11:05	0 - 4
890-542-3	LN-SW06	Solid	04/19/21 15:50	04/20/21 11:05	0 - 4
890-542-4	LN-SW07	Solid	04/19/21 16:00	04/20/21 11:05	0 - 4

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



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 Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 699-6701

Chain of Custody

Work Order No: _____

Project Manager:	Joseph Hernandez	Bill to: (if different)	Kyle Littell
Company Name:	USP Stokel	Company Name:	VTD Energy
Address:	5300 North St	Address:	5101 E Greene St
City, State ZIP:	Middletown TX 74705	City, State ZIP:	Clarksburg, NM 88220
Phone:	(281) 702-2329	Email:	joseph.hernandez@usp.com

Project Name:	JRU DE I	Turn Around	<input type="checkbox"/>
Project Number:	TE012419254	Routine	<input type="checkbox"/>
Project Location:	Edley	Rush:	ZLHK
Sampler's Name:	Ben Bellini	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT		Temp Blank:	<input checked="" type="radio"/> Yes <input type="radio"/> No	Wet Ice:	<input checked="" type="radio"/> Yes <input type="radio"/> No
Temperature (°C):	3.0/2.8	Thermometer ID:	ZTM-007	Correction Factor:	-0.2
Received Intact:	<input checked="" type="radio"/> Yes <input type="radio"/> No	Cooler Custody Seals:	Yes <input type="radio"/> No <input type="radio"/> N/A	Total Containers:	
Sample Custody Seals:	Yes <input type="radio"/> No <input type="radio"/> N/A				



890-542 Chain of Custody

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	ANALYSIS REQUEST	Preservative Codes	Sample Comments
	LN - SW04	S	4/9/21	1300	2-4'	1	TPH (EPA 8015)	MeOH: Me None: NO	
	LN - SW05	S	4/9/21	1400	2-4'	1	BTX (EPA 8021)	HNO3: HN	
	LN - SW 06	S	4/9/21	1550	2-4'	1	Chloride (EPA 300.0)	H2SO4: H2	
	LN - SW 07	S	4/9/21	1600	2-4'	1		HCL: HL NaOH: Na Zn Acetate + NaOH: Zn	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed: TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.4 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	7/19/21 1057	<i>[Signature]</i>	<i>[Signature]</i>	4-20-21 1105

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

Chain of Custody Record



eurofins
 Environment Testing
 America

Client Information (Sub Contract Lab)		Sampler	Lab PM	Carrier Tracking No(s)	COC No:
Client Contact:	Phone:	Kramer Jessica	E-Mail	Jessica.kramer@eurofins.com	890-175-1
Shipping/Receiving	Company	Eurofins Xenco	Accreditations Required (See note)	NELAP - Louisiana NELAP - Texas	Page 1 of 1
Address:	Due Date Requested	1211 W Florida Ave	4/21/2021	Job #:	890-542-1
City:	TAT Requested (days)	Midland		Preservation Codes	A HCl B NaOH C Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Amthor H Ascorbic Acid I Ice J DI Water K EDTA L EDA M Hexane N -None O AsHAc2 P Na2O4S Q Na2SO3 R Na2S2O3 S H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 Z other (specify)
State, Zip	PO #	TX 79701			
Phone	WOC #	432-704-5440(Tel)			
Email	Project #				
Project Name	SSOV#	JRU DI 1			
Site:					

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=soil, G=grab, RT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of containers	Special Instructions/Note.
LN-SW04 (890-542-1)	4/19/21	13 00		Solid	X	X		1	
LN-SW05 (890-542-2)	4/19/21	14 00		Solid	X	X		1	
LN-SW06 (890-542-3)	4/19/21	15 50		Solid	X	X		1	
LN-SW07 (890-542-4)	4/19/21	16 00		Solid	X	X		1	

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

Possible Hazard Identification

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

Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: Gabor Orosz Date/Time: 4/20/21 Company: _____ Received by: _____ Date/Time: 4-21-21 11:00 AM Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____ Received by: _____ Date/Time: _____ Company: _____

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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-542-1
SDG Number: TE012919259

Login Number: 542

List Number: 1

Creator: Ordonez, Gabby

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-542-1
SDG Number: TE012919259

Login Number: 542
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 04/21/21 11:24 AM

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

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-560-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI 1 Combined

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

Attn: Dan Moir

Authorized for release by:
4/26/2021 6:41:19 PM

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



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

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

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Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Laboratory Job ID: 890-560-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-560-1
SDG: TE012919259

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high 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
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-560-1
SDG: TE012919259

Job ID: 890-560-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-560-1

Receipt

The sample was received on 4/23/2021 10:07 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.4°C

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: LW-SW01 (890-560-1).

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.

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Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-560-1
SDG: TE012919259

Client Sample ID: LW-SW01

Lab Sample ID: 890-560-1

Date Collected: 04/22/21 11:30

Matrix: Solid

Date Received: 04/23/21 10:07

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/23/21 15:00	04/23/21 20:24	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/23/21 15:00	04/23/21 20:24	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/23/21 15:00	04/23/21 20:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/23/21 15:00	04/23/21 20:24	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/23/21 15:00	04/23/21 20:24	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/23/21 15:00	04/23/21 20:24	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		04/23/21 15:00	04/23/21 20:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	04/23/21 15:00	04/23/21 20:24	1
1,4-Difluorobenzene (Surr)	114		70 - 130	04/23/21 15:00	04/23/21 20:24	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/23/21 16:50	04/24/21 22:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/23/21 16:50	04/24/21 22:30	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/23/21 16:50	04/24/21 22:30	1
Total TPH	<50.0	U	50.0	mg/Kg		04/23/21 16:50	04/24/21 22:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	135	S1+	70 - 130	04/23/21 16:50	04/24/21 22:30	1
o-Terphenyl	140	S1+	70 - 130	04/23/21 16:50	04/24/21 22:30	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	377		24.8	mg/Kg			04/26/21 14:48	5

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-560-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-560-1	LW-SW01	99	114
LCS 880-2188/1-A	Lab Control Sample	87	100
LCSD 880-2188/2-A	Lab Control Sample Dup	90	108
MB 880-2188/5-A	Method Blank	112	95

Surrogate Legend

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

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-560-1	LW-SW01	135 S1+	140 S1+
LCS 880-2256/2-A	Lab Control Sample	112	109
LCSD 880-2256/3-A	Lab Control Sample Dup	115	112
MB 880-2256/1-A	Method Blank	106	113

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-560-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2188/5-A
Matrix: Solid
Analysis Batch: 2194

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2188

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		04/23/21 09:30	04/23/21 13:43	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/23/21 09:30	04/23/21 13:43	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/23/21 09:30	04/23/21 13:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/23/21 09:30	04/23/21 13:43	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/23/21 09:30	04/23/21 13:43	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/23/21 09:30	04/23/21 13:43	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		04/23/21 09:30	04/23/21 13:43	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	112		70 - 130	04/23/21 09:30	04/23/21 13:43	1
1,4-Difluorobenzene (Surr)	95		70 - 130	04/23/21 09:30	04/23/21 13:43	1

Lab Sample ID: LCS 880-2188/1-A
Matrix: Solid
Analysis Batch: 2194

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2188

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Benzene	0.100	0.08280		mg/Kg		83	70 - 130
Toluene	0.100	0.09163		mg/Kg		92	70 - 130
Ethylbenzene	0.100	0.08635		mg/Kg		86	70 - 130
m-Xylene & p-Xylene	0.200	0.1772		mg/Kg		89	70 - 130
o-Xylene	0.100	0.08741		mg/Kg		87	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	87		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCSD 880-2188/2-A
Matrix: Solid
Analysis Batch: 2194

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2188

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec. Limits	RPD	
		Result	Qualifier					RPD	Limit
Benzene	0.100	0.08264		mg/Kg		83	70 - 130	0	35
Toluene	0.100	0.09915		mg/Kg		99	70 - 130	8	35
Ethylbenzene	0.100	0.09046		mg/Kg		90	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.1887		mg/Kg		94	70 - 130	6	35
o-Xylene	0.100	0.09066		mg/Kg		91	70 - 130	4	35

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-560-1
SDG: TE012919259

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

Lab Sample ID: MB 880-2256/1-A
Matrix: Solid
Analysis Batch: 2267

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2256

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/23/21 16:50	04/24/21 13:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/23/21 16:50	04/24/21 13:54	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/23/21 16:50	04/24/21 13:54	1
Total TPH	<50.0	U	50.0	mg/Kg		04/23/21 16:50	04/24/21 13:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	04/23/21 16:50	04/24/21 13:54	1
o-Terphenyl	113		70 - 130	04/23/21 16:50	04/24/21 13:54	1

Lab Sample ID: LCS 880-2256/2-A
Matrix: Solid
Analysis Batch: 2267

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	985.0		mg/Kg		98	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1027		mg/Kg		103	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	112		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: LCSD 880-2256/3-A
Matrix: Solid
Analysis Batch: 2267

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2256

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1005		mg/Kg		101	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	1041		mg/Kg		104	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	112		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2317/1-A
Matrix: Solid
Analysis Batch: 2343

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/26/21 13:47	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI 1 Combined

Job ID: 890-560-1
 SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-2317/2-A
 Matrix: Solid
 Analysis Batch: 2343

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	252.3		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-2317/3-A
 Matrix: Solid
 Analysis Batch: 2343

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	252.4		mg/Kg		101	90 - 110	0	20

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-560-1
SDG: TE012919259

GC VOA

Prep Batch: 2188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-560-1	LW-SW01	Total/NA	Solid	5035	
MB 880-2188/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2188/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2188/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 2194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-560-1	LW-SW01	Total/NA	Solid	8021B	2188
MB 880-2188/5-A	Method Blank	Total/NA	Solid	8021B	2188
LCS 880-2188/1-A	Lab Control Sample	Total/NA	Solid	8021B	2188
LCSD 880-2188/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2188

GC Semi VOA

Prep Batch: 2256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-560-1	LW-SW01	Total/NA	Solid	8015NM Prep	
MB 880-2256/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2256/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2256/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 2267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-560-1	LW-SW01	Total/NA	Solid	8015B NM	2256
MB 880-2256/1-A	Method Blank	Total/NA	Solid	8015B NM	2256
LCS 880-2256/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2256
LCSD 880-2256/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2256

HPLC/IC

Leach Batch: 2317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-560-1	LW-SW01	Soluble	Solid	DI Leach	
MB 880-2317/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2317/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2317/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 2343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-560-1	LW-SW01	Soluble	Solid	300.0	2317
MB 880-2317/1-A	Method Blank	Soluble	Solid	300.0	2317
LCS 880-2317/2-A	Lab Control Sample	Soluble	Solid	300.0	2317
LCSD 880-2317/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2317

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-560-1
SDG: TE012919259

Client Sample ID: LW-SW01

Lab Sample ID: 890-560-1

Date Collected: 04/22/21 11:30

Matrix: Solid

Date Received: 04/23/21 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2188	04/23/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2194	04/23/21 20:24	KL	XM
Total/NA	Prep	8015NM Prep			2256	04/23/21 16:50	DM	XM
Total/NA	Analysis	8015B NM		1	2267	04/24/21 22:30	AJ	XM
Soluble	Leach	DI Leach			2317	04/26/21 09:41	SC	XM
Soluble	Analysis	300.0		5	2343	04/26/21 14:48	SC	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: JRU DI 1 Combined

Job ID: 890-560-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
 Project/Site: JRU DI 1 Combined

Job ID: 890-560-1
 SDG: TE012919259

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-560-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-560-1	LW-SW01	Solid	04/22/21 11:30	04/23/21 10:07	0 - 4

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

Chain of Custody

Work Order No: _____

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Litrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	bbeill@ltenv.com

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

Project Name:	TRU DI I Landmark	Turn Around	<input type="checkbox"/>
Project Number:	TE012919 259	Route:	<input type="checkbox"/>
P.O. Number:	Eddy	Rush:	24HR
Sampler's Name:	Benjamin Bellill	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes <input checked="" type="radio"/> No <input type="radio"/>	Well Ice:	Yes <input type="radio"/> No <input checked="" type="radio"/>
Temperature (°C):	34.0/3.4	Thermometer ID	ZMM-007	
Received Inact:	Yes <input checked="" type="radio"/> No <input type="radio"/>	Correction Factor:	-0.2	
Cooler Custody Seals:	Yes <input type="radio"/> No <input type="radio"/>	Total Containers:		
Sample Custody Seals:	Yes <input type="radio"/> No <input type="radio"/>			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth
4W-SW01	S	4/22/21	11:30	0-4

Number of Containers	
TPH (EPA 8015)	X
BTEX (EPA 0-8021)	X
Chloride (EPA 300.0)	X



ANALYSIS REQUEST	Work Order Notes
	ATF 2021.01559 Eddy Fast Getter! 1082151001
	TAT starts the day received by the lab, if received by 4:30pm
	Sample Comments

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	4/23/21 10:57	<i>[Signature]</i>	<i>[Signature]</i>	

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-560-1
SDG Number: TE012919259

Login Number: 560
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-560-1
SDG Number: TE012919259

Login Number: 560
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 04/23/21 02:42 PM

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

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Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-561-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI 1 Combined
Revision: 1

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

Attn: Dan Moir

Authorized for release by:
4/28/2021 7:49:49 PM

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

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

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

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Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Laboratory Job ID: 890-561-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

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, high biased.
*1	LCS/LCSD RPD exceeds control limits.
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
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

Job ID: 890-561-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-561-1

REVISION

The report being provided is a revision of the original report sent on 4/26/2021. The report (revision 1) is being revised due to Client requesting re run on sample SW03 for TPH.

Report revision history

Receipt

The samples were received on 4/23/2021 10:07 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 3.4°C

GC VOA

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

GC Semi VOA

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

HPLC/IC

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



Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

Client Sample ID: LW-SW03

Lab Sample ID: 890-561-1

Date Collected: 04/22/21 14:45

Matrix: Solid

Date Received: 04/23/21 10:07

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00232		0.00198	mg/Kg		04/23/21 15:00	04/23/21 20:45	1
Toluene	<0.00198	U	0.00198	mg/Kg		04/23/21 15:00	04/23/21 20:45	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		04/23/21 15:00	04/23/21 20:45	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		04/23/21 15:00	04/23/21 20:45	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		04/23/21 15:00	04/23/21 20:45	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		04/23/21 15:00	04/23/21 20:45	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		04/23/21 15:00	04/23/21 20:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	04/23/21 15:00	04/23/21 20:45	1
1,4-Difluorobenzene (Surr)	118		70 - 130	04/23/21 15:00	04/23/21 20:45	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1 *+	49.9	mg/Kg		04/27/21 10:20	04/28/21 18:22	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/27/21 10:20	04/28/21 18:22	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/27/21 10:20	04/28/21 18:22	1
Total TPH	<49.9	U	49.9	mg/Kg		04/27/21 10:20	04/28/21 18:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130	04/27/21 10:20	04/28/21 18:22	1
o-Terphenyl	90		70 - 130	04/27/21 10:20	04/28/21 18:22	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	267		49.5	mg/Kg			04/26/21 17:05	10

Client Sample ID: LW-SW04

Lab Sample ID: 890-561-2

Date Collected: 04/22/21 12:00

Matrix: Solid

Date Received: 04/23/21 10:07

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/23/21 15:00	04/23/21 21:06	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/23/21 15:00	04/23/21 21:06	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/23/21 15:00	04/23/21 21:06	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/23/21 15:00	04/23/21 21:06	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/23/21 15:00	04/23/21 21:06	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/23/21 15:00	04/23/21 21:06	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		04/23/21 15:00	04/23/21 21:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130	04/23/21 15:00	04/23/21 21:06	1
1,4-Difluorobenzene (Surr)	118		70 - 130	04/23/21 15:00	04/23/21 21:06	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

Client Sample ID: LW-SW04

Lab Sample ID: 890-561-2

Date Collected: 04/22/21 12:00

Matrix: Solid

Date Received: 04/23/21 10:07

Sample Depth: 0 - 4

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/23/21 17:08	04/26/21 14:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/23/21 17:08	04/26/21 14:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/23/21 17:08	04/26/21 14:31	1
Total TPH	<50.0	U	50.0	mg/Kg		04/23/21 17:08	04/26/21 14:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130	04/23/21 17:08	04/26/21 14:31	1
o-Terphenyl	111		70 - 130	04/23/21 17:08	04/26/21 14:31	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	290		49.5	mg/Kg			04/26/21 14:54	10

Client Sample ID: LW-SW05

Lab Sample ID: 890-561-3

Date Collected: 04/22/21 13:20

Matrix: Solid

Date Received: 04/23/21 10:07

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		04/23/21 15:00	04/23/21 21:26	1
Toluene	<0.00202	U	0.00202	mg/Kg		04/23/21 15:00	04/23/21 21:26	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		04/23/21 15:00	04/23/21 21:26	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		04/23/21 15:00	04/23/21 21:26	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		04/23/21 15:00	04/23/21 21:26	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		04/23/21 15:00	04/23/21 21:26	1
Total BTEX	<0.00403	U	0.00403	mg/Kg		04/23/21 15:00	04/23/21 21:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	04/23/21 15:00	04/23/21 21:26	1
1,4-Difluorobenzene (Surr)	108		70 - 130	04/23/21 15:00	04/23/21 21:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/23/21 17:08	04/26/21 14:52	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/23/21 17:08	04/26/21 14:52	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/23/21 17:08	04/26/21 14:52	1
Total TPH	<49.9	U	49.9	mg/Kg		04/23/21 17:08	04/26/21 14:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130	04/23/21 17:08	04/26/21 14:52	1
o-Terphenyl	108		70 - 130	04/23/21 17:08	04/26/21 14:52	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	398		50.0	mg/Kg			04/26/21 14:59	10

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

Client Sample ID: LW-SW06

Lab Sample ID: 890-561-4

Date Collected: 04/22/21 13:50

Matrix: Solid

Date Received: 04/23/21 10:07

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/23/21 15:00	04/23/21 21:47	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/23/21 15:00	04/23/21 21:47	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/23/21 15:00	04/23/21 21:47	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		04/23/21 15:00	04/23/21 21:47	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/23/21 15:00	04/23/21 21:47	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		04/23/21 15:00	04/23/21 21:47	1
Total BTEX	<0.00401	U	0.00401	mg/Kg		04/23/21 15:00	04/23/21 21:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130	04/23/21 15:00	04/23/21 21:47	1
1,4-Difluorobenzene (Surr)	108		70 - 130	04/23/21 15:00	04/23/21 21:47	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/23/21 17:08	04/26/21 15:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/23/21 17:08	04/26/21 15:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/23/21 17:08	04/26/21 15:13	1
Total TPH	<50.0	U	50.0	mg/Kg		04/23/21 17:08	04/26/21 15:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130	04/23/21 17:08	04/26/21 15:13	1
o-Terphenyl	110		70 - 130	04/23/21 17:08	04/26/21 15:13	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	397		50.4	mg/Kg			04/26/21 15:04	10

Client Sample ID: LW-SW07

Lab Sample ID: 890-561-5

Date Collected: 04/22/21 14:20

Matrix: Solid

Date Received: 04/23/21 10:07

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/23/21 15:00	04/23/21 22:08	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/23/21 15:00	04/23/21 22:08	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/23/21 15:00	04/23/21 22:08	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		04/23/21 15:00	04/23/21 22:08	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/23/21 15:00	04/23/21 22:08	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		04/23/21 15:00	04/23/21 22:08	1
Total BTEX	<0.00401	U	0.00401	mg/Kg		04/23/21 15:00	04/23/21 22:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	04/23/21 15:00	04/23/21 22:08	1
1,4-Difluorobenzene (Surr)	116		70 - 130	04/23/21 15:00	04/23/21 22:08	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
 SDG: TE012919259

Client Sample ID: LW-SW07

Lab Sample ID: 890-561-5

Date Collected: 04/22/21 14:20

Matrix: Solid

Date Received: 04/23/21 10:07

Sample Depth: 0 - 4

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/23/21 17:08	04/26/21 15:34	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/23/21 17:08	04/26/21 15:34	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/23/21 17:08	04/26/21 15:34	1
Total TPH	<49.9	U	49.9	mg/Kg		04/23/21 17:08	04/26/21 15:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130	04/23/21 17:08	04/26/21 15:34	1
o-Terphenyl	120		70 - 130	04/23/21 17:08	04/26/21 15:34	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	537		50.5	mg/Kg			04/26/21 15:09	10

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-561-1	LW-SW03	105	118
890-561-2	LW-SW04	94	118
890-561-3	LW-SW05	92	108
890-561-4	LW-SW06	94	108
890-561-5	LW-SW07	99	116
LCS 880-2188/1-A	Lab Control Sample	87	100
LCSD 880-2188/2-A	Lab Control Sample Dup	90	108
MB 880-2188/5-A	Method Blank	112	95

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
890-561-1	LW-SW03	99	90
890-561-2	LW-SW04	114	111
890-561-3	LW-SW05	109	108
890-561-4	LW-SW06	109	110
890-561-5	LW-SW07	115	120
LCS 880-2256/2-A	Lab Control Sample	112	109
LCS 880-2259/2-A	Lab Control Sample	103	97
LCS 880-2377/2-A	Lab Control Sample	130	113
LCSD 880-2256/3-A	Lab Control Sample Dup	115	112
LCSD 880-2259/3-A	Lab Control Sample Dup	101	94
LCSD 880-2377/3-A	Lab Control Sample Dup	110	100
MB 880-2256/1-A	Method Blank	106	113
MB 880-2259/1-A	Method Blank	101	103
MB 880-2377/1-A	Method Blank	114	108

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2188/5-A
Matrix: Solid
Analysis Batch: 2194

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2188

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		04/23/21 09:30	04/23/21 13:43	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/23/21 09:30	04/23/21 13:43	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/23/21 09:30	04/23/21 13:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/23/21 09:30	04/23/21 13:43	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/23/21 09:30	04/23/21 13:43	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/23/21 09:30	04/23/21 13:43	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		04/23/21 09:30	04/23/21 13:43	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	112		70 - 130	04/23/21 09:30	04/23/21 13:43	1
1,4-Difluorobenzene (Surr)	95		70 - 130	04/23/21 09:30	04/23/21 13:43	1

Lab Sample ID: LCS 880-2188/1-A
Matrix: Solid
Analysis Batch: 2194

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2188

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	0.100	0.09163		mg/Kg		92	70 - 130
Ethylbenzene	0.100	0.08635		mg/Kg		86	70 - 130
m-Xylene & p-Xylene	0.200	0.1772		mg/Kg		89	70 - 130
o-Xylene	0.100	0.08741		mg/Kg		87	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	87		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCSD 880-2188/2-A
Matrix: Solid
Analysis Batch: 2194

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2188

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	
								RPD	Limit
Benzene	0.100	0.08264		mg/Kg		83	70 - 130	0	35
Toluene	0.100	0.09915		mg/Kg		99	70 - 130	8	35
Ethylbenzene	0.100	0.09046		mg/Kg		90	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.1887		mg/Kg		94	70 - 130	6	35
o-Xylene	0.100	0.09066		mg/Kg		91	70 - 130	4	35

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

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

Lab Sample ID: MB 880-2256/1-A
Matrix: Solid
Analysis Batch: 2267

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2256

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/23/21 16:50	04/24/21 13:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/23/21 16:50	04/24/21 13:54	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/23/21 16:50	04/24/21 13:54	1
Total TPH	<50.0	U	50.0	mg/Kg		04/23/21 16:50	04/24/21 13:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	04/23/21 16:50	04/24/21 13:54	1
o-Terphenyl	113		70 - 130	04/23/21 16:50	04/24/21 13:54	1

Lab Sample ID: LCS 880-2256/2-A
Matrix: Solid
Analysis Batch: 2267

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	985.0		mg/Kg		98	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1027		mg/Kg		103	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	112		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: LCSD 880-2256/3-A
Matrix: Solid
Analysis Batch: 2267

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2256

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1005		mg/Kg		101	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	1041		mg/Kg		104	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	112		70 - 130

Lab Sample ID: MB 880-2259/1-A
Matrix: Solid
Analysis Batch: 2304

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2259

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/23/21 17:08	04/26/21 08:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/23/21 17:08	04/26/21 08:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/23/21 17:08	04/26/21 08:31	1
Total TPH	<50.0	U	50.0	mg/Kg		04/23/21 17:08	04/26/21 08:31	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130	04/23/21 17:08	04/26/21 08:31	1
o-Terphenyl	103		70 - 130	04/23/21 17:08	04/26/21 08:31	1

Lab Sample ID: LCS 880-2259/2-A
Matrix: Solid
Analysis Batch: 2304

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2259

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1082		mg/Kg		108	70 - 130
Diesel Range Organics (Over C10-C28)	1000	993.3		mg/Kg		99	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	97		70 - 130

Lab Sample ID: LCSD 880-2259/3-A
Matrix: Solid
Analysis Batch: 2304

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2259

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1078		mg/Kg		108	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	1000	988.0		mg/Kg		99	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	94		70 - 130

Lab Sample ID: MB 880-2377/1-A
Matrix: Solid
Analysis Batch: 2425

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2377

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/27/21 10:20	04/28/21 10:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/27/21 10:20	04/28/21 10:35	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/27/21 10:20	04/28/21 10:35	1
Total TPH	<50.0	U	50.0	mg/Kg		04/27/21 10:20	04/28/21 10:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130	04/27/21 10:20	04/28/21 10:35	1
o-Terphenyl	108		70 - 130	04/27/21 10:20	04/28/21 10:35	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

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

Lab Sample ID: LCS 880-2377/2-A
Matrix: Solid
Analysis Batch: 2425

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2377

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Gasoline Range Organics (GRO)-C6-C10	1000	1476	*+	mg/Kg		148	70 - 130	
Diesel Range Organics (Over C10-C28)	1000	1231		mg/Kg		123	70 - 130	
		LCS	LCS					
Surrogate		%Recovery	Qualifier	Limits				
1-Chlorooctane		130		70 - 130				
o-Terphenyl		113		70 - 130				

Lab Sample ID: LCSD 880-2377/3-A
Matrix: Solid
Analysis Batch: 2425

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2377

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1178	*1	mg/Kg		118	70 - 130	23	20
Diesel Range Organics (Over C10-C28)	1000	1020		mg/Kg		102	70 - 130	19	20
		LCSD	LCSD						
Surrogate		%Recovery	Qualifier	Limits					
1-Chlorooctane		110		70 - 130					
o-Terphenyl		100		70 - 130					

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2318/1-A
Matrix: Solid
Analysis Batch: 2328

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/26/21 14:38	1

Lab Sample ID: LCS 880-2318/2-A
Matrix: Solid
Analysis Batch: 2328

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	256.5		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 880-2318/3-A
Matrix: Solid
Analysis Batch: 2328

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	258.2		mg/Kg		103	90 - 110	1	20

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QC Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
 SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 880-2317/1-A
 Matrix: Solid
 Analysis Batch: 2343

Client Sample ID: Method Blank
 Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/26/21 13:47	1

Lab Sample ID: LCS 880-2317/2-A
 Matrix: Solid
 Analysis Batch: 2343

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	252.3		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-2317/3-A
 Matrix: Solid
 Analysis Batch: 2343

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	252.4		mg/Kg		101	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

GC VOA

Prep Batch: 2188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-561-1	LW-SW03	Total/NA	Solid	5035	
890-561-2	LW-SW04	Total/NA	Solid	5035	
890-561-3	LW-SW05	Total/NA	Solid	5035	
890-561-4	LW-SW06	Total/NA	Solid	5035	
890-561-5	LW-SW07	Total/NA	Solid	5035	
MB 880-2188/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2188/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2188/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 2194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-561-1	LW-SW03	Total/NA	Solid	8021B	2188
890-561-2	LW-SW04	Total/NA	Solid	8021B	2188
890-561-3	LW-SW05	Total/NA	Solid	8021B	2188
890-561-4	LW-SW06	Total/NA	Solid	8021B	2188
890-561-5	LW-SW07	Total/NA	Solid	8021B	2188
MB 880-2188/5-A	Method Blank	Total/NA	Solid	8021B	2188
LCS 880-2188/1-A	Lab Control Sample	Total/NA	Solid	8021B	2188
LCSD 880-2188/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2188

GC Semi VOA

Prep Batch: 2256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-2256/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2256/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2256/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Prep Batch: 2259

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-561-2	LW-SW04	Total/NA	Solid	8015NM Prep	
890-561-3	LW-SW05	Total/NA	Solid	8015NM Prep	
890-561-4	LW-SW06	Total/NA	Solid	8015NM Prep	
890-561-5	LW-SW07	Total/NA	Solid	8015NM Prep	
MB 880-2259/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2259/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2259/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 2267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-2256/1-A	Method Blank	Total/NA	Solid	8015B NM	2256
LCS 880-2256/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2256
LCSD 880-2256/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2256

Analysis Batch: 2304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-561-2	LW-SW04	Total/NA	Solid	8015B NM	2259
890-561-3	LW-SW05	Total/NA	Solid	8015B NM	2259
890-561-4	LW-SW06	Total/NA	Solid	8015B NM	2259
890-561-5	LW-SW07	Total/NA	Solid	8015B NM	2259
MB 880-2259/1-A	Method Blank	Total/NA	Solid	8015B NM	2259

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

GC Semi VOA (Continued)

Analysis Batch: 2304 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-2259/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2259
LCSD 880-2259/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2259

Prep Batch: 2377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-561-1	LW-SW03	Total/NA	Solid	8015NM Prep	
MB 880-2377/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2377/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2377/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 2425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-561-1	LW-SW03	Total/NA	Solid	8015B NM	2377
MB 880-2377/1-A	Method Blank	Total/NA	Solid	8015B NM	2377
LCS 880-2377/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2377
LCSD 880-2377/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2377

HPLC/IC

Leach Batch: 2317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-561-2	LW-SW04	Soluble	Solid	DI Leach	
890-561-3	LW-SW05	Soluble	Solid	DI Leach	
890-561-4	LW-SW06	Soluble	Solid	DI Leach	
890-561-5	LW-SW07	Soluble	Solid	DI Leach	
MB 880-2317/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2317/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2317/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Leach Batch: 2318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-561-1	LW-SW03	Soluble	Solid	DI Leach	
MB 880-2318/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2318/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2318/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 2328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-561-1	LW-SW03	Soluble	Solid	300.0	2318
MB 880-2318/1-A	Method Blank	Soluble	Solid	300.0	2318
LCS 880-2318/2-A	Lab Control Sample	Soluble	Solid	300.0	2318
LCSD 880-2318/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2318

Analysis Batch: 2343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-561-2	LW-SW04	Soluble	Solid	300.0	2317
890-561-3	LW-SW05	Soluble	Solid	300.0	2317
890-561-4	LW-SW06	Soluble	Solid	300.0	2317
890-561-5	LW-SW07	Soluble	Solid	300.0	2317
MB 880-2317/1-A	Method Blank	Soluble	Solid	300.0	2317
LCS 880-2317/2-A	Lab Control Sample	Soluble	Solid	300.0	2317

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

HPLC/IC (Continued)

Analysis Batch: 2343 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-2317/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2317

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Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

Client Sample ID: LW-SW03

Lab Sample ID: 890-561-1

Date Collected: 04/22/21 14:45

Matrix: Solid

Date Received: 04/23/21 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2188	04/23/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2194	04/23/21 20:45	KL	XM
Total/NA	Prep	8015NM Prep			2377	04/27/21 10:20	DM	XM
Total/NA	Analysis	8015B NM		1	2425	04/28/21 18:22	AJ	XM
Soluble	Leach	DI Leach			2318	04/26/21 09:51	SC	XM
Soluble	Analysis	300.0		10	2328	04/26/21 17:05	SC	XM

Client Sample ID: LW-SW04

Lab Sample ID: 890-561-2

Date Collected: 04/22/21 12:00

Matrix: Solid

Date Received: 04/23/21 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2188	04/23/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2194	04/23/21 21:06	KL	XM
Total/NA	Prep	8015NM Prep			2259	04/23/21 17:08	DM	XM
Total/NA	Analysis	8015B NM		1	2304	04/26/21 14:31	AJ	XM
Soluble	Leach	DI Leach			2317	04/26/21 09:41	SC	XM
Soluble	Analysis	300.0		10	2343	04/26/21 14:54	SC	XM

Client Sample ID: LW-SW05

Lab Sample ID: 890-561-3

Date Collected: 04/22/21 13:20

Matrix: Solid

Date Received: 04/23/21 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2188	04/23/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2194	04/23/21 21:26	KL	XM
Total/NA	Prep	8015NM Prep			2259	04/23/21 17:08	DM	XM
Total/NA	Analysis	8015B NM		1	2304	04/26/21 14:52	AJ	XM
Soluble	Leach	DI Leach			2317	04/26/21 09:41	SC	XM
Soluble	Analysis	300.0		10	2343	04/26/21 14:59	SC	XM

Client Sample ID: LW-SW06

Lab Sample ID: 890-561-4

Date Collected: 04/22/21 13:50

Matrix: Solid

Date Received: 04/23/21 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2188	04/23/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2194	04/23/21 21:47	KL	XM
Total/NA	Prep	8015NM Prep			2259	04/23/21 17:08	DM	XM
Total/NA	Analysis	8015B NM		1	2304	04/26/21 15:13	AJ	XM
Soluble	Leach	DI Leach			2317	04/26/21 09:41	SC	XM
Soluble	Analysis	300.0		10	2343	04/26/21 15:04	SC	XM

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
 Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
 SDG: TE012919259

Client Sample ID: LW-SW07
Date Collected: 04/22/21 14:20
Date Received: 04/23/21 10:07

Lab Sample ID: 890-561-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2188	04/23/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2194	04/23/21 22:08	KL	XM
Total/NA	Prep	8015NM Prep			2259	04/23/21 17:08	DM	XM
Total/NA	Analysis	8015B NM		1	2304	04/26/21 15:34	AJ	XM
Soluble	Leach	DI Leach			2317	04/26/21 09:41	SC	XM
Soluble	Analysis	300.0		10	2343	04/26/21 15:09	SC	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: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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

Eurofins Xenco, Carlsbad

Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-561-1	LW-SW03	Solid	04/22/21 14:45	04/23/21 10:07	0 - 4
890-561-2	LW-SW04	Solid	04/22/21 12:00	04/23/21 10:07	0 - 4
890-561-3	LW-SW05	Solid	04/22/21 13:20	04/23/21 10:07	0 - 4
890-561-4	LW-SW06	Solid	04/22/21 13:50	04/23/21 10:07	0 - 4
890-561-5	LW-SW07	Solid	04/22/21 14:20	04/23/21 10:07	0 - 4

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

Chain of Custody

Work Order No: _____

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	bbellill@ltenv.com

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

Project Name:	JRO OI I Ambud	Turn Around	
Project Number:	TEB12919259	Routine	<input type="checkbox"/>
P.O. Number:	Eddy	Rush:	24HR
Sampler's Name:	Benjamin Bellill	Due Date:	
SAMPLE RECEIPT	Temp Blank:	Yes	No
Temperature (°C):	3.0/3.4	Thermometer ID:	ZMM-0057
Received Inact:	Yes	No	Correction Factor:
Cooler Custody Seals:	Yes	No	N/A
Sample Custody Seals:	Yes	No	N/A
		Total Containers:	

Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)



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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	Sample Comments
LW-SW03	S	4/22/21	1445	0-4'				
LW-SW04			1200	0-4'				
LW-SW05			1320	0-4'				
LW-SW06			1350	0-4'				
LW-SW07			1420	0-4'				

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 AI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SIO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		4/23/21 10:00			4:23:21 1007

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-561-1
SDG Number: TE012919259

Login Number: 561
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-561-1
SDG Number: TE012919259

Login Number: 561
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 04/23/21 02:44 PM

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

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-571-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU D11

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

Attn: Dan Moir

Authorized for release by:
4/27/2021 12:54:05 PM

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



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

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

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Client: WSP USA Inc.
Project/Site: JRU DI1

Laboratory Job ID: 890-571-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU D11

Job ID: 890-571-1
SDG: TE012919259

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high 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
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-571-1
SDG: TE012919259

Job ID: 890-571-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

**Job Narrative
890-571-1**

Receipt

The sample was received on 4/23/2021 4:50 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.6°C

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-2338 and analytical batch 880-2315 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

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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Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-571-1
SDG: TE012919259

Client Sample ID: LW-SW02

Lab Sample ID: 890-571-1

Date Collected: 04/23/21 12:00

Matrix: Solid

Date Received: 04/23/21 16:50

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00212	*- *1	0.00202	mg/Kg		04/26/21 15:48	04/27/21 00:25	1
Toluene	<0.00202	U *- *1	0.00202	mg/Kg		04/26/21 15:48	04/27/21 00:25	1
Ethylbenzene	<0.00202	U *- *1	0.00202	mg/Kg		04/26/21 15:48	04/27/21 00:25	1
m-Xylene & p-Xylene	<0.00404	U *- *1	0.00404	mg/Kg		04/26/21 15:48	04/27/21 00:25	1
o-Xylene	<0.00202	U *- *1	0.00202	mg/Kg		04/26/21 15:48	04/27/21 00:25	1
Xylenes, Total	<0.00404	U *- *1	0.00404	mg/Kg		04/26/21 15:48	04/27/21 00:25	1
Total BTEX	<0.00404	U *- *1	0.00404	mg/Kg		04/26/21 15:48	04/27/21 00:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	04/26/21 15:48	04/27/21 00:25	1
1,4-Difluorobenzene (Surr)	127		70 - 130	04/26/21 15:48	04/27/21 00:25	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1	mg/Kg		04/26/21 13:23	04/27/21 02:50	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1	mg/Kg		04/26/21 13:23	04/27/21 02:50	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		04/26/21 13:23	04/27/21 02:50	1
Total TPH	<50.1	U	50.1	mg/Kg		04/26/21 13:23	04/27/21 02:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	129		70 - 130	04/26/21 13:23	04/27/21 02:50	1
o-Terphenyl	131	S1+	70 - 130	04/26/21 13:23	04/27/21 02:50	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	466		49.6	mg/Kg			04/26/21 16:23	10

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-571-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-571-1	LW-SW02	105	127
890-571-1 MS	LW-SW02	101	109
890-571-1 MSD	LW-SW02	99	111
LCS 880-2338/1-A	Lab Control Sample	95	105
LCSD 880-2338/2-A	Lab Control Sample Dup	92	109
MB 880-2314/5-A	Method Blank	106	85
MB 880-2338/5-A	Method Blank	114	103

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
890-571-1	LW-SW02	129	131 S1+
LCS 880-2326/2-A	Lab Control Sample	105	104
LCSD 880-2326/3-A	Lab Control Sample Dup	111	105
MB 880-2326/1-A	Method Blank	106	110

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-571-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2314/5-A
Matrix: Solid
Analysis Batch: 2315

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2314

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		04/26/21 08:44	04/26/21 12:07	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/26/21 08:44	04/26/21 12:07	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/26/21 08:44	04/26/21 12:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/26/21 08:44	04/26/21 12:07	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/26/21 08:44	04/26/21 12:07	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/26/21 08:44	04/26/21 12:07	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		04/26/21 08:44	04/26/21 12:07	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	106		70 - 130	04/26/21 08:44	04/26/21 12:07	1
1,4-Difluorobenzene (Surr)	85		70 - 130	04/26/21 08:44	04/26/21 12:07	1

Lab Sample ID: MB 880-2338/5-A
Matrix: Solid
Analysis Batch: 2315

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2338

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		04/26/21 15:48	04/27/21 00:03	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/26/21 15:48	04/27/21 00:03	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/26/21 15:48	04/27/21 00:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/26/21 15:48	04/27/21 00:03	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/26/21 15:48	04/27/21 00:03	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/26/21 15:48	04/27/21 00:03	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		04/26/21 15:48	04/27/21 00:03	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	114		70 - 130	04/26/21 15:48	04/27/21 00:03	1
1,4-Difluorobenzene (Surr)	103		70 - 130	04/26/21 15:48	04/27/21 00:03	1

Lab Sample ID: LCS 880-2338/1-A
Matrix: Solid
Analysis Batch: 2315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2338

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Benzene	0.100	0.08044		mg/Kg		80	70 - 130
Toluene	0.100	0.09159		mg/Kg		92	70 - 130
Ethylbenzene	0.100	0.08684		mg/Kg		87	70 - 130
m-Xylene & p-Xylene	0.200	0.1811		mg/Kg		91	70 - 130
o-Xylene	0.100	0.09065		mg/Kg		91	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-571-1
SDG: TE012919259

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

Lab Sample ID: LCSD 880-2338/2-A
Matrix: Solid
Analysis Batch: 2315

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2338

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	
								RPD	Limit
Benzene	0.100	0.04572	*- *1	mg/Kg		46	70 - 130	55	35
Toluene	0.100	0.02608	*- *1	mg/Kg		26	70 - 130	111	35
Ethylbenzene	0.100	0.01119	*- *1	mg/Kg		11	70 - 130	154	35
m-Xylene & p-Xylene	0.200	0.02200	*- *1	mg/Kg		11	70 - 130	157	35
o-Xylene	0.100	0.01484	*- *1	mg/Kg		15	70 - 130	144	35

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	92		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Lab Sample ID: 890-571-1 MS
Matrix: Solid
Analysis Batch: 2315

Client Sample ID: LW-SW02
Prep Type: Total/NA
Prep Batch: 2338

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	
										RPD	Limit
Benzene	0.00212	*- *1	0.100	0.07427		mg/Kg		72	70 - 130		
Toluene	<0.00202	U *- *1	0.100	0.08464		mg/Kg		84	70 - 130		
Ethylbenzene	<0.00202	U *- *1	0.100	0.08095		mg/Kg		81	70 - 130		
m-Xylene & p-Xylene	<0.00404	U *- *1	0.201	0.1660		mg/Kg		83	70 - 130		
o-Xylene	<0.00202	U *- *1	0.100	0.08049		mg/Kg		80	70 - 130		

Surrogate	MS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Lab Sample ID: 890-571-1 MSD
Matrix: Solid
Analysis Batch: 2315

Client Sample ID: LW-SW02
Prep Type: Total/NA
Prep Batch: 2338

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	
										RPD	Limit
Benzene	0.00212	*- *1	0.100	0.07975		mg/Kg		77	70 - 130	7	35
Toluene	<0.00202	U *- *1	0.100	0.08832		mg/Kg		88	70 - 130	4	35
Ethylbenzene	<0.00202	U *- *1	0.100	0.08771		mg/Kg		87	70 - 130	8	35
m-Xylene & p-Xylene	<0.00404	U *- *1	0.201	0.1723		mg/Kg		86	70 - 130	4	35
o-Xylene	<0.00202	U *- *1	0.100	0.08500		mg/Kg		85	70 - 130	5	35

Surrogate	MSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU D11

Job ID: 890-571-1
SDG: TE012919259

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

Lab Sample ID: MB 880-2326/1-A
Matrix: Solid
Analysis Batch: 2306

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2326

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/26/21 13:23	04/26/21 18:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/26/21 13:23	04/26/21 18:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/26/21 13:23	04/26/21 18:03	1
Total TPH	<50.0	U	50.0	mg/Kg		04/26/21 13:23	04/26/21 18:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	04/26/21 13:23	04/26/21 18:03	1
o-Terphenyl	110		70 - 130	04/26/21 13:23	04/26/21 18:03	1

Lab Sample ID: LCS 880-2326/2-A
Matrix: Solid
Analysis Batch: 2306

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2326

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1143		mg/Kg		114	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1024		mg/Kg		102	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	104		70 - 130

Lab Sample ID: LCSD 880-2326/3-A
Matrix: Solid
Analysis Batch: 2306

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2326

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1224		mg/Kg		122	70 - 130	7	20
Diesel Range Organics (Over C10-C28)	1000	1033		mg/Kg		103	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	105		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2317/1-A
Matrix: Solid
Analysis Batch: 2343

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/26/21 13:47	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-571-1
SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-2317/2-A
Matrix: Solid
Analysis Batch: 2343

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	252.3		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-2317/3-A
Matrix: Solid
Analysis Batch: 2343

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	252.4		mg/Kg		101	90 - 110	0	20

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU D11Job ID: 890-571-1
SDG: TE012919259

GC VOA

Prep Batch: 2314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-2314/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 2315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-571-1	LW-SW02	Total/NA	Solid	8021B	2338
MB 880-2314/5-A	Method Blank	Total/NA	Solid	8021B	2314
MB 880-2338/5-A	Method Blank	Total/NA	Solid	8021B	2338
LCS 880-2338/1-A	Lab Control Sample	Total/NA	Solid	8021B	2338
LCSD 880-2338/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2338
890-571-1 MS	LW-SW02	Total/NA	Solid	8021B	2338
890-571-1 MSD	LW-SW02	Total/NA	Solid	8021B	2338

Prep Batch: 2338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-571-1	LW-SW02	Total/NA	Solid	5035	
MB 880-2338/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2338/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2338/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-571-1 MS	LW-SW02	Total/NA	Solid	5035	
890-571-1 MSD	LW-SW02	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 2306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-571-1	LW-SW02	Total/NA	Solid	8015B NM	2326
MB 880-2326/1-A	Method Blank	Total/NA	Solid	8015B NM	2326
LCS 880-2326/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2326
LCSD 880-2326/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2326

Prep Batch: 2326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-571-1	LW-SW02	Total/NA	Solid	8015NM Prep	
MB 880-2326/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2326/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2326/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 2317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-571-1	LW-SW02	Soluble	Solid	DI Leach	
MB 880-2317/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2317/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2317/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 2343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-571-1	LW-SW02	Soluble	Solid	300.0	2317
MB 880-2317/1-A	Method Blank	Soluble	Solid	300.0	2317
LCS 880-2317/2-A	Lab Control Sample	Soluble	Solid	300.0	2317
LCSD 880-2317/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2317

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-571-1
SDG: TE012919259

Client Sample ID: LW-SW02

Lab Sample ID: 890-571-1

Date Collected: 04/23/21 12:00

Matrix: Solid

Date Received: 04/23/21 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2338	04/26/21 15:48	KL	XM
Total/NA	Analysis	8021B		1	2315	04/27/21 00:25	KL	XM
Total/NA	Prep	8015NM Prep			2326	04/26/21 13:23	DM	XM
Total/NA	Analysis	8015B NM		1	2306	04/27/21 02:50	AJ	XM
Soluble	Leach	DI Leach			2317	04/26/21 15:45	SC	XM
Soluble	Analysis	300.0		10	2343	04/26/21 16:23	SC	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: JRU DI1

Job ID: 890-571-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-571-1
SDG: TE012919259

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-571-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-571-1	LW-SW02	Solid	04/23/21 12:00	04/23/21 16:50	0 - 4

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Chain of Custody

Work Order No: _____

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440 EL Paso, TX (915) 595-3443 Lubbock, TX (806) 794-1296
 Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8900 Tampa, FL (813) 620-2000
 www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	bbellill@xteny.com

Project Name:	TRD DIT	Turn Around	
Project Number:	TE022919259	Routine	<input type="checkbox"/>
P.O. Number:	Edly	Rush:	24 HR
Sampler's Name:	Benjamin Bellill	Due Date:	

Temp Blank:	<input checked="" type="checkbox"/> Yes	Wet Ice:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Temperature (°C):	3.8/3.6	Thermometer ID	ZNM-007	
Received Inact:	<input checked="" type="checkbox"/> Yes	Correction Factor:	1.0 ± 2	
Cooler Custody Seals:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Total Containers:	
Sample Custody Seals:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	N/A	

ANALYSIS REQUEST	Work Order Notes
TPB (EPA 8015) <input type="checkbox"/> BTEX (EPA 0-8021) <input type="checkbox"/> Chloride (EPA 300.0) <input type="checkbox"/>	Program: UST/PST <input type="checkbox"/> PRR <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/> State of Project: <input type="checkbox"/> Level II <input type="checkbox"/> Level III <input type="checkbox"/> ST/UST <input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/> Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: <input type="checkbox"/>
Barcode: 890-571 Chain of Custody TAT starts the day received by the lab, if received by 4:30pm	Work Order Notes: AFE EW, 2021.01559, ERPI lost date: 10/2/15/2021

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPB (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	Sample Comments
LW-SW02	S	4/28/21	12:00	0-4'	1	X	X	X	4/28/21 BOD

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SIO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631/245.1/7470/7471 : Hg

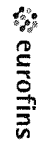
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco. The client and subcontractors. It assigns standard terms and conditions of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		4-23-21 16:42			4-23-21 16:44

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Eurofins Xenco, Carlsbad

Chain of Custody Record



Environment Testing America

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

Client Information (Sub Contract Lab)

Client Contact:
Shipping/Receiving:
Company: Eurofins Xenco

Sampler:
Phone:
E-Mail: Jessica Kramer

Lab PM: Kramer Jessica
E-Mail: jessica.kramer@eurofins.com

Carrier Tracking No(s):
State of Origin: New Mexico

COC No: 890-183-1
Page: Page 1 of 1

Address: 1211 W. Florida Ave
City: Midland
State/Zip: TX, 79701

Due Date Requested: 4/27/2021
TAT Requested (days):

Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas

Job #: 890-571-1

Phone: 432-704-5440(Tel)
Email:
Project Name: JRU D11
Site:
Project #: 89000004
SOW#:
Matrix (Water or Solid, or Tissue AAL)

PO #:
WOC #:
Project #: 89000004
SOW#:
Matrix (Water or Solid, or Tissue AAL)

Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas

Job #: 890-571-1

City: Midland
State/Zip: TX, 79701

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City: Midland
State/Zip: TX, 79701

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Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas

Job #: 890-571-1

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Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas

Job #: 890-571-1

City: Midland
State/Zip: TX, 79701

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WOC #:
Project #: 89000004
SOW#:
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Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas

Job #: 890-571-1

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Job #: 890-571-1

City: Midland
State/Zip: TX, 79701

PO #:
WOC #:
Project #: 89000004
SOW#:
Matrix (Water or Solid, or Tissue AAL)

Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas

Job #: 890-571-1

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Water or Solid, or Tissue AAL)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Special Instructions/Note:
LW-SW02 (890-571-1)	4/23/21	12:00	Mountain	Solid	X	X	8015MOD_NM/8015NM_S_Prep Full TPH 300_ORGFM_28D/DL_LEACH Chloride 8021B/6035FP_Calc BTEX	1

Possible Hazard Identification

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

Empty Kit Relinquished by:
Date/Time:
Company:
Relinquished by:
Date/Time:
Company:
Relinquished by:
Date/Time:
Company:
Custody Seats Intact:
A Yes A No Custody Seal No

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

Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:
Method of Shipment:
Received by:
Date/Time:
Company:
Received by:
Date/Time:
Company:
Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-571-1
SDG Number: TE012919259

Login Number: 571
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-571-1
SDG Number: TE012919259

Login Number: 571
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 04/26/21 03:22 PM

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

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-582-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU D11
Revision: 1

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

Attn: Dan Moir

Authorized for release by:
5/5/2021 9:06:21 AM

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

LINKS

Review your project
results through
Total Access

Have a Question?



Visit us at:
www.eurofinsus.com/Env

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

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

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Client: WSP USA Inc.
Project/Site: JRU DI1

Laboratory Job ID: 890-582-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-582-1
SDG: TE012919259

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-582-1
SDG: TE012919259

Job ID: 890-582-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-582-1

Comments

No additional comments.

Receipt

The samples were received on 4/27/2021 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 was 3.8° C.

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: FS01 (890-582-1), FS02 (890-582-2), FS03 (890-582-3), FS04 (890-582-4), SW01 (890-582-5) and SW02 (890-582-6).

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-2384 and analytical batch 880-2381 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Internal standard responses were outside of acceptance limits for the following samples: FS03 (890-582-3) and SW01 (890-582-5). The sample(s) shows evidence of matrix interference.

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

GC Semi VOA

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

General Chemistry

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

Organic Prep

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

VOA Prep

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



Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-582-1
SDG: TE012919259

Client Sample ID: FS01

Lab Sample ID: 890-582-1

Date Collected: 04/26/21 10:30

Matrix: Solid

Date Received: 04/27/21 11:31

Sample Depth: - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/28/21 12:45	04/28/21 13:08	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/28/21 12:45	04/28/21 13:08	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/28/21 12:45	04/28/21 13:08	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/28/21 12:45	04/28/21 13:08	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/28/21 12:45	04/28/21 13:08	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/28/21 12:45	04/28/21 13:08	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		04/28/21 12:45	04/28/21 13:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	04/28/21 12:45	04/28/21 13:08	1
1,4-Difluorobenzene (Surr)	105		70 - 130	04/28/21 12:45	04/28/21 13:08	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/28/21 13:56	04/29/21 04:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/28/21 13:56	04/29/21 04:33	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/28/21 13:56	04/29/21 04:33	1
Total TPH	<49.9	U	49.9	mg/Kg		04/28/21 13:56	04/29/21 04:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	04/28/21 13:56	04/29/21 04:33	1
o-Terphenyl	101		70 - 130	04/28/21 13:56	04/29/21 04:33	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	422		49.6	mg/Kg			04/28/21 17:15	10

Client Sample ID: FS02

Lab Sample ID: 890-582-2

Date Collected: 04/26/21 11:00

Matrix: Solid

Date Received: 04/27/21 11:31

Sample Depth: - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/28/21 12:45	04/28/21 13:28	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/28/21 12:45	04/28/21 13:28	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/28/21 12:45	04/28/21 13:28	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/28/21 12:45	04/28/21 13:28	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/28/21 12:45	04/28/21 13:28	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/28/21 12:45	04/28/21 13:28	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		04/28/21 12:45	04/28/21 13:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	04/28/21 12:45	04/28/21 13:28	1
1,4-Difluorobenzene (Surr)	106		70 - 130	04/28/21 12:45	04/28/21 13:28	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-582-1
SDG: TE012919259

Client Sample ID: FS02

Lab Sample ID: 890-582-2

Date Collected: 04/26/21 11:00

Matrix: Solid

Date Received: 04/27/21 11:31

Sample Depth: - 2

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/28/21 13:56	04/29/21 04:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/28/21 13:56	04/29/21 04:54	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/28/21 13:56	04/29/21 04:54	1
Total TPH	<49.9	U	49.9	mg/Kg		04/28/21 13:56	04/29/21 04:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	04/28/21 13:56	04/29/21 04:54	1
o-Terphenyl	105		70 - 130	04/28/21 13:56	04/29/21 04:54	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	115		24.8	mg/Kg			04/28/21 17:20	5

Client Sample ID: FS03

Lab Sample ID: 890-582-3

Date Collected: 04/26/21 11:30

Matrix: Solid

Date Received: 04/27/21 11:31

Sample Depth: - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00244	U	0.00244	mg/Kg		04/28/21 12:45	04/28/21 13:49	1
Toluene	<0.00244	U	0.00244	mg/Kg		04/28/21 12:45	04/28/21 13:49	1
Ethylbenzene	<0.00244	U	0.00244	mg/Kg		04/28/21 12:45	04/28/21 13:49	1
m-Xylene & p-Xylene	<0.00488	U	0.00488	mg/Kg		04/28/21 12:45	04/28/21 13:49	1
o-Xylene	<0.00244	U	0.00244	mg/Kg		04/28/21 12:45	04/28/21 13:49	1
Xylenes, Total	<0.00488	U	0.00488	mg/Kg		04/28/21 12:45	04/28/21 13:49	1
Total BTEX	<0.00488	U	0.00488	mg/Kg		04/28/21 12:45	04/28/21 13:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130	04/28/21 12:45	04/28/21 13:49	1
1,4-Difluorobenzene (Surr)	98		70 - 130	04/28/21 12:45	04/28/21 13:49	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/28/21 13:56	04/29/21 05:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/28/21 13:56	04/29/21 05:15	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/28/21 13:56	04/29/21 05:15	1
Total TPH	<50.0	U	50.0	mg/Kg		04/28/21 13:56	04/29/21 05:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	04/28/21 13:56	04/29/21 05:15	1
o-Terphenyl	99		70 - 130	04/28/21 13:56	04/29/21 05:15	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	309		5.04	mg/Kg			04/28/21 17:25	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-582-1
SDG: TE012919259

Client Sample ID: FS04

Lab Sample ID: 890-582-4

Date Collected: 04/26/21 12:00

Matrix: Solid

Date Received: 04/27/21 11:31

Sample Depth: - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/28/21 12:45	04/28/21 14:09	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/28/21 12:45	04/28/21 14:09	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/28/21 12:45	04/28/21 14:09	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/28/21 12:45	04/28/21 14:09	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/28/21 12:45	04/28/21 14:09	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/28/21 12:45	04/28/21 14:09	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		04/28/21 12:45	04/28/21 14:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	04/28/21 12:45	04/28/21 14:09	1
1,4-Difluorobenzene (Surr)	107		70 - 130	04/28/21 12:45	04/28/21 14:09	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1	mg/Kg		04/28/21 13:56	04/29/21 05:36	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1	mg/Kg		04/28/21 13:56	04/29/21 05:36	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		04/28/21 13:56	04/29/21 05:36	1
Total TPH	<50.1	U	50.1	mg/Kg		04/28/21 13:56	04/29/21 05:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130	04/28/21 13:56	04/29/21 05:36	1
o-Terphenyl	103		70 - 130	04/28/21 13:56	04/29/21 05:36	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	191		25.1	mg/Kg			04/28/21 17:31	5

Client Sample ID: SW01

Lab Sample ID: 890-582-5

Date Collected: 04/26/21 12:30

Matrix: Solid

Date Received: 04/27/21 11:31

Sample Depth: 0 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		04/28/21 12:45	04/28/21 14:30	1
Toluene	<0.00202	U	0.00202	mg/Kg		04/28/21 12:45	04/28/21 14:30	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		04/28/21 12:45	04/28/21 14:30	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		04/28/21 12:45	04/28/21 14:30	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		04/28/21 12:45	04/28/21 14:30	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		04/28/21 12:45	04/28/21 14:30	1
Total BTEX	<0.00403	U	0.00403	mg/Kg		04/28/21 12:45	04/28/21 14:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130	04/28/21 12:45	04/28/21 14:30	1
1,4-Difluorobenzene (Surr)	88		70 - 130	04/28/21 12:45	04/28/21 14:30	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-582-1
SDG: TE012919259

Client Sample ID: SW01

Lab Sample ID: 890-582-5

Date Collected: 04/26/21 12:30

Matrix: Solid

Date Received: 04/27/21 11:31

Sample Depth: 0 - 3

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/28/21 13:56	04/29/21 05:58	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/28/21 13:56	04/29/21 05:58	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/28/21 13:56	04/29/21 05:58	1
Total TPH	<49.9	U	49.9	mg/Kg		04/28/21 13:56	04/29/21 05:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130	04/28/21 13:56	04/29/21 05:58	1
o-Terphenyl	104		70 - 130	04/28/21 13:56	04/29/21 05:58	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	629		49.9	mg/Kg			05/04/21 19:15	10

Client Sample ID: SW02

Lab Sample ID: 890-582-6

Date Collected: 04/26/21 13:00

Matrix: Solid

Date Received: 04/27/21 11:31

Sample Depth: 0 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/28/21 12:45	04/28/21 14:50	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/28/21 12:45	04/28/21 14:50	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/28/21 12:45	04/28/21 14:50	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/28/21 12:45	04/28/21 14:50	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/28/21 12:45	04/28/21 14:50	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/28/21 12:45	04/28/21 14:50	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		04/28/21 12:45	04/28/21 14:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	04/28/21 12:45	04/28/21 14:50	1
1,4-Difluorobenzene (Surr)	107		70 - 130	04/28/21 12:45	04/28/21 14:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/28/21 13:56	04/29/21 06:19	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/28/21 13:56	04/29/21 06:19	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/28/21 13:56	04/29/21 06:19	1
Total TPH	<49.9	U	49.9	mg/Kg		04/28/21 13:56	04/29/21 06:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	04/28/21 13:56	04/29/21 06:19	1
o-Terphenyl	98		70 - 130	04/28/21 13:56	04/29/21 06:19	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	135		49.8	mg/Kg			04/28/21 17:51	10

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-582-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-582-1	FS01	106	105
890-582-2	FS02	108	106
890-582-3	FS03	114	98
890-582-4	FS04	105	107
890-582-5	SW01	116	88
890-582-6	SW02	108	107
LCS 880-2384/1-A	Lab Control Sample	98	105
LCSD 880-2384/2-A	Lab Control Sample Dup	97	105
MB 880-2378/5-A	Method Blank	99	102
MB 880-2384/5-A	Method Blank	101	103

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
890-582-1	FS01	102	101
890-582-2	FS02	106	105
890-582-3	FS03	103	99
890-582-4	FS04	108	103
890-582-5	SW01	112	104
890-582-6	SW02	103	98
LCS 880-2454/2-A	Lab Control Sample	106	95
LCSD 880-2454/3-A	Lab Control Sample Dup	107	96
MB 880-2454/1-A	Method Blank	104	102

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-582-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2378/5-A
Matrix: Solid
Analysis Batch: 2381

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2378

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		04/27/21 10:20	04/27/21 17:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/27/21 10:20	04/27/21 17:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/27/21 10:20	04/27/21 17:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/27/21 10:20	04/27/21 17:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/27/21 10:20	04/27/21 17:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/27/21 10:20	04/27/21 17:48	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		04/27/21 10:20	04/27/21 17:48	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	99		70 - 130	04/27/21 10:20	04/27/21 17:48	1
1,4-Difluorobenzene (Surr)	102		70 - 130	04/27/21 10:20	04/27/21 17:48	1

Lab Sample ID: MB 880-2384/5-A
Matrix: Solid
Analysis Batch: 2381

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2384

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		04/27/21 13:00	04/28/21 11:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/27/21 13:00	04/28/21 11:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/27/21 13:00	04/28/21 11:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/27/21 13:00	04/28/21 11:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/27/21 13:00	04/28/21 11:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/27/21 13:00	04/28/21 11:12	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		04/27/21 13:00	04/28/21 11:12	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	101		70 - 130	04/27/21 13:00	04/28/21 11:12	1
1,4-Difluorobenzene (Surr)	103		70 - 130	04/27/21 13:00	04/28/21 11:12	1

Lab Sample ID: LCS 880-2384/1-A
Matrix: Solid
Analysis Batch: 2381

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2384

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
Benzene	0.100	0.08005		mg/Kg		80	70 - 130
Toluene	0.100	0.08346		mg/Kg		83	70 - 130
Ethylbenzene	0.100	0.08929		mg/Kg		89	70 - 130
m-Xylene & p-Xylene	0.200	0.1794		mg/Kg		90	70 - 130
o-Xylene	0.100	0.09000		mg/Kg		90	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-582-1
SDG: TE012919259

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

Lab Sample ID: LCSD 880-2384/2-A
Matrix: Solid
Analysis Batch: 2381

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2384

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.08003		mg/Kg		80	70 - 130	0	35
Toluene	0.100	0.08162		mg/Kg		82	70 - 130	2	35
Ethylbenzene	0.100	0.08730		mg/Kg		87	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1747		mg/Kg		87	70 - 130	3	35
o-Xylene	0.100	0.08757		mg/Kg		88	70 - 130	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

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

Lab Sample ID: MB 880-2454/1-A
Matrix: Solid
Analysis Batch: 2421

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2454

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/28/21 13:56	04/29/21 08:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/28/21 13:56	04/29/21 08:48	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/28/21 13:56	04/29/21 08:48	1
Total TPH	<50.0	U	50.0	mg/Kg		04/28/21 13:56	04/29/21 08:48	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130	04/28/21 13:56	04/29/21 08:48	1
o-Terphenyl	102		70 - 130	04/28/21 13:56	04/29/21 08:48	1

Lab Sample ID: LCS 880-2454/2-A
Matrix: Solid
Analysis Batch: 2421

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2454

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	934.9		mg/Kg		93	70 - 130
Diesel Range Organics (Over C10-C28)	1000	846.9		mg/Kg		85	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: LCSD 880-2454/3-A
Matrix: Solid
Analysis Batch: 2421

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2454

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1012		mg/Kg		101	70 - 130	8	20

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-582-1
SDG: TE012919259

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

Lab Sample ID: LCSD 880-2454/3-A
Matrix: Solid
Analysis Batch: 2421

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2454

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (Over C10-C28)	1000	864.4		mg/Kg		86	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	96		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2455/1-A
Matrix: Solid
Analysis Batch: 2457

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/28/21 16:44	1

Lab Sample ID: LCS 880-2455/2-A
Matrix: Solid
Analysis Batch: 2457

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	258.6		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 880-2455/3-A
Matrix: Solid
Analysis Batch: 2457

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	255.9		mg/Kg		102	90 - 110	1	20

Lab Sample ID: MB 880-2631/1-A
Matrix: Solid
Analysis Batch: 2634

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/03/21 15:39	1

Lab Sample ID: LCS 880-2631/2-A
Matrix: Solid
Analysis Batch: 2634

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	252.4		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-2631/3-A
Matrix: Solid
Analysis Batch: 2634

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	250.0		mg/Kg		100	90 - 110	1	20

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-582-1
SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 880-2564/1-A
Matrix: Solid
Analysis Batch: 2689

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/04/21 16:39	1

Lab Sample ID: LCS 880-2564/2-A
Matrix: Solid
Analysis Batch: 2689

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	255.1		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-2564/3-A
Matrix: Solid
Analysis Batch: 2689

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	255.4		mg/Kg		102	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-582-1
SDG: TE012919259

GC VOA

Prep Batch: 2378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-2378/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 2381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-582-1	FS01	Total/NA	Solid	8021B	2384
890-582-2	FS02	Total/NA	Solid	8021B	2384
890-582-3	FS03	Total/NA	Solid	8021B	2384
890-582-4	FS04	Total/NA	Solid	8021B	2384
890-582-5	SW01	Total/NA	Solid	8021B	2384
890-582-6	SW02	Total/NA	Solid	8021B	2384
MB 880-2378/5-A	Method Blank	Total/NA	Solid	8021B	2378
MB 880-2384/5-A	Method Blank	Total/NA	Solid	8021B	2384
LCS 880-2384/1-A	Lab Control Sample	Total/NA	Solid	8021B	2384
LCSD 880-2384/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2384

Prep Batch: 2384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-582-1	FS01	Total/NA	Solid	5035	
890-582-2	FS02	Total/NA	Solid	5035	
890-582-3	FS03	Total/NA	Solid	5035	
890-582-4	FS04	Total/NA	Solid	5035	
890-582-5	SW01	Total/NA	Solid	5035	
890-582-6	SW02	Total/NA	Solid	5035	
MB 880-2384/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2384/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2384/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 2421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-582-1	FS01	Total/NA	Solid	8015B NM	2454
890-582-2	FS02	Total/NA	Solid	8015B NM	2454
890-582-3	FS03	Total/NA	Solid	8015B NM	2454
890-582-4	FS04	Total/NA	Solid	8015B NM	2454
890-582-5	SW01	Total/NA	Solid	8015B NM	2454
890-582-6	SW02	Total/NA	Solid	8015B NM	2454
MB 880-2454/1-A	Method Blank	Total/NA	Solid	8015B NM	2454
LCS 880-2454/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2454
LCSD 880-2454/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2454

Prep Batch: 2454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-582-1	FS01	Total/NA	Solid	8015NM Prep	
890-582-2	FS02	Total/NA	Solid	8015NM Prep	
890-582-3	FS03	Total/NA	Solid	8015NM Prep	
890-582-4	FS04	Total/NA	Solid	8015NM Prep	
890-582-5	SW01	Total/NA	Solid	8015NM Prep	
890-582-6	SW02	Total/NA	Solid	8015NM Prep	
MB 880-2454/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2454/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-582-1
SDG: TE012919259

GC Semi VOA (Continued)

Prep Batch: 2454 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-2454/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 2455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-582-1	FS01	Soluble	Solid	DI Leach	
890-582-2	FS02	Soluble	Solid	DI Leach	
890-582-3	FS03	Soluble	Solid	DI Leach	
890-582-4	FS04	Soluble	Solid	DI Leach	
890-582-6	SW02	Soluble	Solid	DI Leach	
MB 880-2455/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2455/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2455/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 2457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-582-1	FS01	Soluble	Solid	300.0	2455
890-582-2	FS02	Soluble	Solid	300.0	2455
890-582-3	FS03	Soluble	Solid	300.0	2455
890-582-4	FS04	Soluble	Solid	300.0	2455
890-582-6	SW02	Soluble	Solid	300.0	2455
MB 880-2455/1-A	Method Blank	Soluble	Solid	300.0	2455
LCS 880-2455/2-A	Lab Control Sample	Soluble	Solid	300.0	2455
LCSD 880-2455/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2455

Leach Batch: 2564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-582-5	SW01	Soluble	Solid	DI Leach	
MB 880-2564/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2564/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2564/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Leach Batch: 2631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-2631/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2631/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2631/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 2634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-2631/1-A	Method Blank	Soluble	Solid	300.0	2631
LCS 880-2631/2-A	Lab Control Sample	Soluble	Solid	300.0	2631
LCSD 880-2631/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2631

Analysis Batch: 2689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-582-5	SW01	Soluble	Solid	300.0	2564
MB 880-2564/1-A	Method Blank	Soluble	Solid	300.0	2564
LCS 880-2564/2-A	Lab Control Sample	Soluble	Solid	300.0	2564
LCSD 880-2564/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2564

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-582-1
SDG: TE012919259

Client Sample ID: FS01

Date Collected: 04/26/21 10:30

Date Received: 04/27/21 11:31

Lab Sample ID: 890-582-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2384	04/28/21 12:45	KL	XM
Total/NA	Analysis	8021B		1	2381	04/28/21 13:08	MR	XM
Total/NA	Prep	8015NM Prep			2454	04/28/21 13:56	DM	XM
Total/NA	Analysis	8015B NM		1	2421	04/29/21 04:33	AJ	XM
Soluble	Leach	DI Leach			2455	04/28/21 14:55	SC	XM
Soluble	Analysis	300.0		10	2457	04/28/21 17:15	SC	XM

Client Sample ID: FS02

Date Collected: 04/26/21 11:00

Date Received: 04/27/21 11:31

Lab Sample ID: 890-582-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2384	04/28/21 12:45	KL	XM
Total/NA	Analysis	8021B		1	2381	04/28/21 13:28	MR	XM
Total/NA	Prep	8015NM Prep			2454	04/28/21 13:56	DM	XM
Total/NA	Analysis	8015B NM		1	2421	04/29/21 04:54	AJ	XM
Soluble	Leach	DI Leach			2455	04/28/21 14:55	SC	XM
Soluble	Analysis	300.0		5	2457	04/28/21 17:20	SC	XM

Client Sample ID: FS03

Date Collected: 04/26/21 11:30

Date Received: 04/27/21 11:31

Lab Sample ID: 890-582-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2384	04/28/21 12:45	KL	XM
Total/NA	Analysis	8021B		1	2381	04/28/21 13:49	MR	XM
Total/NA	Prep	8015NM Prep			2454	04/28/21 13:56	DM	XM
Total/NA	Analysis	8015B NM		1	2421	04/29/21 05:15	AJ	XM
Soluble	Leach	DI Leach			2455	04/28/21 14:55	SC	XM
Soluble	Analysis	300.0		1	2457	04/28/21 17:25	SC	XM

Client Sample ID: FS04

Date Collected: 04/26/21 12:00

Date Received: 04/27/21 11:31

Lab Sample ID: 890-582-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2384	04/28/21 12:45	KL	XM
Total/NA	Analysis	8021B		1	2381	04/28/21 14:09	MR	XM
Total/NA	Prep	8015NM Prep			2454	04/28/21 13:56	DM	XM
Total/NA	Analysis	8015B NM		1	2421	04/29/21 05:36	AJ	XM
Soluble	Leach	DI Leach			2455	04/28/21 14:55	SC	XM
Soluble	Analysis	300.0		5	2457	04/28/21 17:31	SC	XM

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-582-1
SDG: TE012919259

Client Sample ID: SW01**Lab Sample ID: 890-582-5****Date Collected: 04/26/21 12:30****Matrix: Solid****Date Received: 04/27/21 11:31**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2384	04/28/21 12:45	KL	XM
Total/NA	Analysis	8021B		1	2381	04/28/21 14:30	MR	XM
Total/NA	Prep	8015NM Prep			2454	04/28/21 13:56	DM	XM
Total/NA	Analysis	8015B NM		1	2421	04/29/21 05:58	AJ	XM
Soluble	Leach	DI Leach			2564	04/30/21 14:59	CH	XM
Soluble	Analysis	300.0		10	2689	05/04/21 19:15	WP	XM

Client Sample ID: SW02**Lab Sample ID: 890-582-6****Date Collected: 04/26/21 13:00****Matrix: Solid****Date Received: 04/27/21 11:31**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2384	04/28/21 12:45	KL	XM
Total/NA	Analysis	8021B		1	2381	04/28/21 14:50	MR	XM
Total/NA	Prep	8015NM Prep			2454	04/28/21 13:56	DM	XM
Total/NA	Analysis	8015B NM		1	2421	04/29/21 06:19	AJ	XM
Soluble	Leach	DI Leach			2455	04/28/21 14:55	SC	XM
Soluble	Analysis	300.0		10	2457	04/28/21 17:51	SC	XM

Laboratory References:

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

Eurofins Xenco, Carlsbad

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-582-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

- 1
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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-582-1
SDG: TE012919259

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-582-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-582-1	FS01	Solid	04/26/21 10:30	04/27/21 11:31	- 3
890-582-2	FS02	Solid	04/26/21 11:00	04/27/21 11:31	- 2
890-582-3	FS03	Solid	04/26/21 11:30	04/27/21 11:31	- 3
890-582-4	FS04	Solid	04/26/21 12:00	04/27/21 11:31	- 2
890-582-5	SW01	Solid	04/26/21 12:30	04/27/21 11:31	0 - 3
890-582-6	SW02	Solid	04/26/21 13:00	04/27/21 11:31	0 - 3

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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)794-1295
 Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

Chain of Custody

Work Order No: _____

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	bbellill@ltenv.com

Program: UST/PST	<input type="checkbox"/> P RP	<input type="checkbox"/> Brownfields	<input type="checkbox"/> RC	<input type="checkbox"/> Superfund
State of Project:				
Reporting Level II	<input type="checkbox"/>	Level III	<input type="checkbox"/>	ST/UST
Deliverables: EDD	<input type="checkbox"/>	ADAPT	<input type="checkbox"/>	Other:

Project Name:	SRD DTI	Turn Around	
Project Number:	TE012919254	Routine	<input type="checkbox"/>
P.O. Number:	NRM2002741253	Rush:	24HR
Sampler's Name:	Benjamin Bellill	Due Date:	

SAMPLE RECEIPT	Temp Blank:	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Wet Ice:	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Temperature (°C):	40	Thermometer ID				
Received Inact:	Yes	No	Correction Factor:	3.8		
Cooler Custody Seals:	Yes	No	Total Containers:			
Sample Custody Seals:	Yes	No				



890-582 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers			Sample Comments
					TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	
ES01	S	4/26/21	1030	3'	✓	✓	✓	
ES02	S		1100	2'	✓	✓	✓	
ES03	S		1130	3'	✓	✓	✓	
ES04	S		1200	2'	✓	✓	✓	
SW01	S		030	0-3	✓	✓	✓	
SW02	S		1300	0-3	✓	✓	✓	

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	11/5 8/4/21	<i>[Signature]</i>	<i>[Signature]</i>	4/27/21 11:31

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Eurofins Xenco, Carlsbad

Chain of Custody Record



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

Client Information (Sub Contract Lab)

Client Contract: _____
 Shipping/Receiving Company: Eurofins Xenco
 Address: 1211 W Florida Ave
 City: Midland
 State: TX, Zip: 79701
 Phone: 432-704-5440(Tel)
 Email: _____
 Project Name: JRU D11
 Site: _____

Sampler: _____
 Phone: _____

Lab PM: Kramer Jessica
 E-Mail: jessica.kramer@eurofins.com

Carrier Tracking No(s): _____
 State of Origin: New Mexico

Accreditations Required (See note): NELAP - Louisiana NELAP - Texas
 Page: 1 of 1
 Job #: 890-582-1

COC No: 890-187-1
 Preservation Codes

Due Date Requested: 4/28/2021
 TAT Requested (days): _____
 Project #: 89000004
 SOW#: _____

Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	8015MOD_NM/8015NM_S_Prep Full TPH
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	300_ORGFM_28D/DI_LEACH Chloride
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	8021B/6035FP_Calc BTEX

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

Sample Identification - Client ID (Lab ID)

Sample ID	Sample Date	Sample Time	Sample Type (G=grab)	Matrix (W=water, S=solid, O=water, A=air)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of containers	Special Instructions/Note
FS01 (890-582-1)	4/28/21	10:30	Mountain	Solid		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	8015MOD_NM/8015NM_S_Prep Full TPH	1	
FS02 (890-582-2)	4/28/21	11:00	Mountain	Solid		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	300_ORGFM_28D/DI_LEACH Chloride	1	
FS03 (890-582-3)	4/28/21	11:30	Mountain	Solid		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	8021B/6035FP_Calc BTEX	1	
FS04 (890-582-4)	4/28/21	12:00	Mountain	Solid		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		1	
SW01 (890-582-5)	4/28/21	12:30	Mountain	Solid		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		1	
SW02 (890-582-6)	4/28/21	13:00	Mountain	Solid		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		1	

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

Possible Hazard Identification

Deliverable Requested: I II III IV Other (specify) _____
 Primary Deliverable Rank: 2
 Return To Client Disposal By Lab Archive For _____ Months
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: *Joe Cuff* Date/Time: 4-23-21 Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: _____ Custody Seal No: _____
 A Yes Δ No

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-582-1

SDG Number: TE012919259

Login Number: 582

List Number: 1

Creator: Ordonez, Gabby

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-582-1
SDG Number: TE012919259

Login Number: 582
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 04/28/21 01:12 PM

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

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-590-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU D11

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

Attn: Dan Moir

Authorized for release by:
4/30/2021 7:12:16 PM

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



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

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

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Client: WSP USA Inc.
Project/Site: JRU DI1

Laboratory Job ID: 890-590-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-590-1
SDG: TE012919259

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, high 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
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-590-1
SDG: TE012919259

Job ID: 890-590-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-590-1

Receipt

The samples were received on 4/28/2021 3:44 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.0°C

GC VOA

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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Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-590-1
SDG: TE012919259

Client Sample ID: LDPO4-NE

Lab Sample ID: 890-590-1

Date Collected: 04/27/21 10:15

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: - 5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/29/21 11:00	04/30/21 03:04	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/29/21 11:00	04/30/21 03:04	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/29/21 11:00	04/30/21 03:04	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/29/21 11:00	04/30/21 03:04	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/29/21 11:00	04/30/21 03:04	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/29/21 11:00	04/30/21 03:04	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		04/29/21 11:00	04/30/21 03:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	04/29/21 11:00	04/30/21 03:04	1
1,4-Difluorobenzene (Surr)	95		70 - 130	04/29/21 11:00	04/30/21 03:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U **	49.9	mg/Kg		04/29/21 16:25	04/30/21 01:42	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/30/21 01:42	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/30/21 01:42	1
Total TPH	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/30/21 01:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130	04/29/21 16:25	04/30/21 01:42	1
o-Terphenyl	95		70 - 130	04/29/21 16:25	04/30/21 01:42	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	927		25.0	mg/Kg			04/30/21 08:55	5

Client Sample ID: LDPO4D-NE

Lab Sample ID: 890-590-2

Date Collected: 04/27/21 11:30

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: - 24

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		04/29/21 11:00	04/30/21 03:24	1
Toluene	<0.00198	U	0.00198	mg/Kg		04/29/21 11:00	04/30/21 03:24	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		04/29/21 11:00	04/30/21 03:24	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		04/29/21 11:00	04/30/21 03:24	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		04/29/21 11:00	04/30/21 03:24	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		04/29/21 11:00	04/30/21 03:24	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		04/29/21 11:00	04/30/21 03:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130	04/29/21 11:00	04/30/21 03:24	1
1,4-Difluorobenzene (Surr)	92		70 - 130	04/29/21 11:00	04/30/21 03:24	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-590-1
SDG: TE012919259

Client Sample ID: LDPO4D-NE

Lab Sample ID: 890-590-2

Date Collected: 04/27/21 11:30

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: - 24

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *+	50.0	mg/Kg		04/29/21 16:25	04/30/21 02:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 02:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 02:04	1
Total TPH	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 02:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130	04/29/21 16:25	04/30/21 02:04	1
o-Terphenyl	86		70 - 130	04/29/21 16:25	04/30/21 02:04	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	243		25.3	mg/Kg			04/30/21 10:08	5

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-590-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-590-1	LDPO4-NE	101	95
890-590-2	LDPO4D-NE	88	92
LCS 880-2452/1-A	Lab Control Sample	114	102
LCSD 880-2452/2-A	Lab Control Sample Dup	110	102
MB 880-2452/5-A	Method Blank	95	92
MB 880-2456/5-A	Method Blank	90	91

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-590-1	LDPO4-NE	101	95
890-590-2	LDPO4D-NE	93	86
LCS 880-2505/2-A	Lab Control Sample	113	96
LCSD 880-2505/3-A	Lab Control Sample Dup	111	96
MB 880-2505/1-A	Method Blank	107	100

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-590-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2452/5-A
Matrix: Solid
Analysis Batch: 2480

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2452

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		04/29/21 11:00	04/30/21 02:01	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	95		70 - 130	04/29/21 11:00	04/30/21 02:01	1
1,4-Difluorobenzene (Surr)	92		70 - 130	04/29/21 11:00	04/30/21 02:01	1

Lab Sample ID: LCS 880-2452/1-A
Matrix: Solid
Analysis Batch: 2480

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2452

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
							Limit	RPD
Benzene	0.100	0.1008		mg/Kg		101	70 - 130	
Toluene	0.100	0.09564		mg/Kg		96	70 - 130	
Ethylbenzene	0.100	0.09683		mg/Kg		97	70 - 130	
m-Xylene & p-Xylene	0.200	0.2094		mg/Kg		105	70 - 130	
o-Xylene	0.100	0.1057		mg/Kg		106	70 - 130	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	114		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: LCSD 880-2452/2-A
Matrix: Solid
Analysis Batch: 2480

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2452

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	
							Limit	RPD	Limit	RPD
Benzene	0.100	0.1095		mg/Kg		109	70 - 130	8	35	
Toluene	0.100	0.1032		mg/Kg		103	70 - 130	8	35	
Ethylbenzene	0.100	0.1016		mg/Kg		102	70 - 130	5	35	
m-Xylene & p-Xylene	0.200	0.2171		mg/Kg		109	70 - 130	4	35	
o-Xylene	0.100	0.1104		mg/Kg		110	70 - 130	4	35	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: MB 880-2456/5-A
Matrix: Solid
Analysis Batch: 2480

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2456

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		04/28/21 14:55	04/29/21 13:58	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-590-1
SDG: TE012919259

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

Lab Sample ID: MB 880-2456/5-A
Matrix: Solid
Analysis Batch: 2480Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2456

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.00200	U	0.00200	mg/Kg		04/28/21 14:55	04/29/21 13:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/28/21 14:55	04/29/21 13:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/28/21 14:55	04/29/21 13:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/28/21 14:55	04/29/21 13:58	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/28/21 14:55	04/29/21 13:58	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		04/28/21 14:55	04/29/21 13:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130	04/28/21 14:55	04/29/21 13:58	1
1,4-Difluorobenzene (Surr)	91		70 - 130	04/28/21 14:55	04/29/21 13:58	1

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

Lab Sample ID: MB 880-2505/1-A
Matrix: Solid
Analysis Batch: 2468Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2505

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	207.5		50.0	mg/Kg		04/29/21 16:25	04/29/21 21:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/29/21 21:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/29/21 21:04	1
Total TPH	207.5		50.0	mg/Kg		04/29/21 16:25	04/29/21 21:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	04/29/21 16:25	04/29/21 21:04	1
o-Terphenyl	100		70 - 130	04/29/21 16:25	04/29/21 21:04	1

Lab Sample ID: LCS 880-2505/2-A
Matrix: Solid
Analysis Batch: 2468Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2505

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1329	*+	mg/Kg		133	70 - 130
Diesel Range Organics (Over C10-C28)	1000	888.0		mg/Kg		89	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	113		70 - 130
o-Terphenyl	96		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-590-1
SDG: TE012919259

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

Lab Sample ID: LCSD 880-2505/3-A
Matrix: Solid
Analysis Batch: 2468

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2505

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1087		mg/Kg		109	70 - 130	20	20
Diesel Range Organics (Over C10-C28)	1000	867.1		mg/Kg		87	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	96		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2487/1-A
Matrix: Solid
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/30/21 08:39	1

Lab Sample ID: LCS 880-2487/2-A
Matrix: Solid
Analysis Batch: 2513

Client Sample ID: Lab Control Sample
Prep Type: Soluble

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

Lab Sample ID: LCSD 880-2487/3-A
Matrix: Solid
Analysis Batch: 2513

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	250.6		mg/Kg		100	90 - 110	1	20

Lab Sample ID: 890-590-1 MS
Matrix: Solid
Analysis Batch: 2513

Client Sample ID: LDPO4-NE
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	927		1250	2150		mg/Kg		98	90 - 110

Lab Sample ID: 890-590-1 MSD
Matrix: Solid
Analysis Batch: 2513

Client Sample ID: LDPO4-NE
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	927		1250	2091		mg/Kg		93	90 - 110	3	20

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-590-1
SDG: TE012919259

GC VOA

Prep Batch: 2452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-590-1	LDPO4-NE	Total/NA	Solid	5035	
890-590-2	LDPO4D-NE	Total/NA	Solid	5035	
MB 880-2452/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2452/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2452/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 2456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-2456/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 2480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-590-1	LDPO4-NE	Total/NA	Solid	8021B	2452
890-590-2	LDPO4D-NE	Total/NA	Solid	8021B	2452
MB 880-2452/5-A	Method Blank	Total/NA	Solid	8021B	2452
MB 880-2456/5-A	Method Blank	Total/NA	Solid	8021B	2456
LCS 880-2452/1-A	Lab Control Sample	Total/NA	Solid	8021B	2452
LCSD 880-2452/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2452

GC Semi VOA

Analysis Batch: 2468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-590-1	LDPO4-NE	Total/NA	Solid	8015B NM	2505
890-590-2	LDPO4D-NE	Total/NA	Solid	8015B NM	2505
MB 880-2505/1-A	Method Blank	Total/NA	Solid	8015B NM	2505
LCS 880-2505/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2505
LCSD 880-2505/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2505

Prep Batch: 2505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-590-1	LDPO4-NE	Total/NA	Solid	8015NM Prep	
890-590-2	LDPO4D-NE	Total/NA	Solid	8015NM Prep	
MB 880-2505/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2505/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2505/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 2487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-590-1	LDPO4-NE	Soluble	Solid	DI Leach	
890-590-2	LDPO4D-NE	Soluble	Solid	DI Leach	
MB 880-2487/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2487/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2487/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-590-1 MS	LDPO4-NE	Soluble	Solid	DI Leach	
890-590-1 MSD	LDPO4-NE	Soluble	Solid	DI Leach	

Analysis Batch: 2513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-590-1	LDPO4-NE	Soluble	Solid	300.0	2487

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-590-1
SDG: TE012919259

HPLC/IC (Continued)

Analysis Batch: 2513 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-590-2	LDPO4D-NE	Soluble	Solid	300.0	2487
MB 880-2487/1-A	Method Blank	Soluble	Solid	300.0	2487
LCS 880-2487/2-A	Lab Control Sample	Soluble	Solid	300.0	2487
LCSD 880-2487/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2487
890-590-1 MS	LDPO4-NE	Soluble	Solid	300.0	2487
890-590-1 MSD	LDPO4-NE	Soluble	Solid	300.0	2487

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Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-590-1
SDG: TE012919259

Client Sample ID: LDPO4-NE**Lab Sample ID: 890-590-1****Date Collected: 04/27/21 10:15****Matrix: Solid****Date Received: 04/28/21 15:44**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2452	04/29/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2480	04/30/21 03:04	KL	XM
Total/NA	Prep	8015NM Prep			2505	04/29/21 16:25	DM	XM
Total/NA	Analysis	8015B NM		1	2468	04/30/21 01:42	AJ	XM
Soluble	Leach	DI Leach			2487	04/29/21 11:19	CH	XM
Soluble	Analysis	300.0		5	2513	04/30/21 08:55	CH	XM

Client Sample ID: LDPO4D-NE**Lab Sample ID: 890-590-2****Date Collected: 04/27/21 11:30****Matrix: Solid****Date Received: 04/28/21 15:44**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2452	04/29/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2480	04/30/21 03:24	KL	XM
Total/NA	Prep	8015NM Prep			2505	04/29/21 16:25	DM	XM
Total/NA	Analysis	8015B NM		1	2468	04/30/21 02:04	AJ	XM
Soluble	Leach	DI Leach			2487	04/29/21 11:19	CH	XM
Soluble	Analysis	300.0		5	2513	04/30/21 10:08	CH	XM

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-590-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-590-1
SDG: TE012919259

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-590-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-590-1	LDPO4-NE	Solid	04/27/21 10:15	04/28/21 15:44	- 5
890-590-2	LDPO4D-NE	Solid	04/27/21 11:30	04/28/21 15:44	- 24

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

Chain of Custody Record



eurofins
Environment Testing
America

Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:						
Client Contact:	Phone:	Kramer Jessica	E-Mail:	State of Origin:	890-190-1						
Shipping/Receiving:	Jessica.kramer@eurofins.com	Accreditations Required (See note):	NELAP - Louisiana NELAP - Texas	New Mexico	Page 1 of 1						
Company:	Eurofins Xenco	Due Date Requested:	4/30/2021	Job #:	890-590-1						
Address:	1211 W. Florida Ave	TAT Requested (days):		Preservation Codes:	A HCL B NaOH C Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Anchlor H - Ascorbic Acid I Ice J DI Water K EDTA L EDA M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S H2SO4 T TSP Dodecylhydrate U Acetone V MCAA W pH 4.5 Z other (specify)						
City:	Midland	PO #:		W/O #:							
State, Zip:	TX 79701	Project #:	89000004	SSCOW#:							
Phone:	432-704-5440(Tel)	Field Filtered Sample (Yes or No):	<input checked="" type="checkbox"/>	Perform MS/MSD (Yes or No):	<input checked="" type="checkbox"/>						
Email:		8015MOD_NM/8015NM_S_Prep Full TPH		300_ORGFM_28D/DI_LEACH Chloride							
Project Name:	JRU D11	8021B/6036FP_Calc BTEX									
Site:											
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Synthetic, Over-sat, Solid)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of containers	Special Instructions/Note:
LDPO4-NE (890-590-1)		4/27/21	10 15	Mountain	Solid		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		1	
LDPO4D-NE (890-590-2)		4/27/21	11 30	Mountain	Solid		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		1	

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

Possible Hazard Identification
Unconfirmed

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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client
 Disposal By Lab
 Archive For _____ Months

Empty Kit Relinquished by _____ Date _____

Relinquished by _____ Date/Time: 4/29/21 Company _____

Relinquished by _____ Date/Time: _____ Company _____

Relinquished by _____ Date/Time: _____ Company _____

Custody Seals Intact: Yes No Custody Seal No _____

Cooler Temperature(s) °C and Other Remarks _____

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-590-1
SDG Number: TE012919259

Login Number: 590
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-590-1
SDG Number: TE012919259

Login Number: 590
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 04/29/21 04:02 PM

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

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Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-592-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI 1
Revision: 2

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

Attn: Dan Moir

Authorized for release by:
5/4/2021 11:26:10 AM

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



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

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

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Client: WSP USA Inc.
Project/Site: JRU DI 1

Laboratory Job ID: 890-592-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-592-1
SDG: TE012919259

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, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Eurofins Xenco, Carlsbad

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-592-1
SDG: TE012919259

Job ID: 890-592-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-592-1

Comments

No additional comments.

Revision

The report being provided is a revision of the original report sent on 4/30/2021. The report (revision 2) is being revised due to: Reviewing narratives JK 05/04/21.

Report revision history

Revision 1 - 5/3/2021 - Reason - Reviewing narratives JK 05/04/21.

Receipt

The samples were received on 4/28/2021 3:44 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 was 2.0° C.

Receipt Exceptions

Corrected projet name to match COC

Reviewing narratives JK 05/04/21

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: SW01 (890-592-1), SW02 (890-592-2), FS01 (890-592-3), FS02 (890-592-4) and FS03 (890-592-5).

GC VOA

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

GC Semi VOA

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

General Chemistry

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

Organic Prep

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

VOA Prep

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



Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-592-1
SDG: TE012919259

Client Sample ID: SW01

Lab Sample ID: 890-592-1

Date Collected: 04/27/21 15:00

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		04/29/21 11:00	04/30/21 05:06	1
Toluene	0.0132		0.00202	mg/Kg		04/29/21 11:00	04/30/21 05:06	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		04/29/21 11:00	04/30/21 05:06	1
m-Xylene & p-Xylene	0.00825		0.00403	mg/Kg		04/29/21 11:00	04/30/21 05:06	1
o-Xylene	0.00383		0.00202	mg/Kg		04/29/21 11:00	04/30/21 05:06	1
Xylenes, Total	0.0121		0.00403	mg/Kg		04/29/21 11:00	04/30/21 05:06	1
Total BTEX	0.0253		0.00403	mg/Kg		04/29/21 11:00	04/30/21 05:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130	04/29/21 11:00	04/30/21 05:06	1
1,4-Difluorobenzene (Surr)	100		70 - 130	04/29/21 11:00	04/30/21 05:06	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *+	49.9	mg/Kg		04/29/21 16:25	04/30/21 04:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/30/21 04:12	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/30/21 04:12	1
Total TPH	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/30/21 04:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130	04/29/21 16:25	04/30/21 04:12	1
o-Terphenyl	93		70 - 130	04/29/21 16:25	04/30/21 04:12	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	271	^2	4.95	mg/Kg			04/30/21 12:33	1

Client Sample ID: SW02

Lab Sample ID: 890-592-2

Date Collected: 04/27/21 15:15

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		04/29/21 11:00	04/30/21 05:27	1
Toluene	<0.00201	U	0.00201	mg/Kg		04/29/21 11:00	04/30/21 05:27	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		04/29/21 11:00	04/30/21 05:27	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		04/29/21 11:00	04/30/21 05:27	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		04/29/21 11:00	04/30/21 05:27	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		04/29/21 11:00	04/30/21 05:27	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		04/29/21 11:00	04/30/21 05:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130	04/29/21 11:00	04/30/21 05:27	1
1,4-Difluorobenzene (Surr)	99		70 - 130	04/29/21 11:00	04/30/21 05:27	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-592-1
SDG: TE012919259

Client Sample ID: SW02

Lab Sample ID: 890-592-2

Date Collected: 04/27/21 15:15

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: 0 - 4

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U **	50.0	mg/Kg		04/29/21 16:25	04/30/21 04:33	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 04:33	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 04:33	1
Total TPH	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 04:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	124		70 - 130	04/29/21 16:25	04/30/21 04:33	1
o-Terphenyl	112		70 - 130	04/29/21 16:25	04/30/21 04:33	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	516		50.0	mg/Kg			04/30/21 10:51	10

Client Sample ID: FS01

Lab Sample ID: 890-592-3

Date Collected: 04/27/21 15:30

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 06:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 06:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 06:48	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		04/29/21 11:00	04/30/21 06:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 06:48	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		04/29/21 11:00	04/30/21 06:48	1
Total BTEX	<0.00401	U	0.00401	mg/Kg		04/29/21 11:00	04/30/21 06:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	04/29/21 11:00	04/30/21 06:48	1
1,4-Difluorobenzene (Surr)	93		70 - 130	04/29/21 11:00	04/30/21 06:48	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U **	49.9	mg/Kg		04/29/21 16:25	04/30/21 04:55	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/30/21 04:55	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/30/21 04:55	1
Total TPH	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/30/21 04:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130	04/29/21 16:25	04/30/21 04:55	1
o-Terphenyl	88		70 - 130	04/29/21 16:25	04/30/21 04:55	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	382	^2	5.04	mg/Kg			04/30/21 12:39	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-592-1
SDG: TE012919259

Client Sample ID: FS02

Lab Sample ID: 890-592-4

Date Collected: 04/27/21 15:45

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 07:09	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 07:09	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 07:09	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		04/29/21 11:00	04/30/21 07:09	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 07:09	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		04/29/21 11:00	04/30/21 07:09	1
Total BTEX	<0.00401	U	0.00401	mg/Kg		04/29/21 11:00	04/30/21 07:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	04/29/21 11:00	04/30/21 07:09	1
1,4-Difluorobenzene (Surr)	92		70 - 130	04/29/21 11:00	04/30/21 07:09	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *+	50.0	mg/Kg		04/29/21 16:25	04/30/21 05:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 05:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 05:16	1
Total TPH	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 05:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	04/29/21 16:25	04/30/21 05:16	1
o-Terphenyl	89		70 - 130	04/29/21 16:25	04/30/21 05:16	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	208	^2	5.05	mg/Kg			04/30/21 12:44	1

Client Sample ID: FS03

Lab Sample ID: 890-592-5

Date Collected: 04/27/21 16:00

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/29/21 11:00	04/30/21 07:29	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/29/21 11:00	04/30/21 07:29	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/29/21 11:00	04/30/21 07:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/29/21 11:00	04/30/21 07:29	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/29/21 11:00	04/30/21 07:29	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/29/21 11:00	04/30/21 07:29	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		04/29/21 11:00	04/30/21 07:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	04/29/21 11:00	04/30/21 07:29	1
1,4-Difluorobenzene (Surr)	94		70 - 130	04/29/21 11:00	04/30/21 07:29	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-592-1
SDG: TE012919259

Client Sample ID: FS03
Date Collected: 04/27/21 16:00
Date Received: 04/28/21 15:44
Sample Depth: - 4

Lab Sample ID: 890-592-5
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *+	49.9	mg/Kg		04/29/21 16:25	04/30/21 05:44	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/30/21 05:44	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/30/21 05:44	1
Total TPH	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/30/21 05:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	04/29/21 16:25	04/30/21 05:44	1
o-Terphenyl	96		70 - 130	04/29/21 16:25	04/30/21 05:44	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	428	^2	4.98	mg/Kg			04/30/21 12:49	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-592-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-592-1	SW01	119	100
890-592-2	SW02	114	99
890-592-3	FS01	100	93
890-592-4	FS02	104	92
890-592-5	FS03	106	94
LCS 880-2452/1-A	Lab Control Sample	114	102
LCSD 880-2452/2-A	Lab Control Sample Dup	110	102
MB 880-2452/5-A	Method Blank	95	92
MB 880-2456/5-A	Method Blank	90	91

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
890-592-1	SW01	101	93
890-592-2	SW02	124	112
890-592-3	FS01	95	88
890-592-4	FS02	96	89
890-592-5	FS03	103	96
LCS 880-2505/2-A	Lab Control Sample	113	96
LCSD 880-2505/3-A	Lab Control Sample Dup	111	96
MB 880-2505/1-A	Method Blank	107	100

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-592-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2452/5-A
Matrix: Solid
Analysis Batch: 2480

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2452

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		04/29/21 11:00	04/30/21 02:01	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	95		70 - 130	04/29/21 11:00	04/30/21 02:01	1
1,4-Difluorobenzene (Surr)	92		70 - 130	04/29/21 11:00	04/30/21 02:01	1

Lab Sample ID: LCS 880-2452/1-A
Matrix: Solid
Analysis Batch: 2480

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2452

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	0.100	0.09564		mg/Kg		96	70 - 130
Ethylbenzene	0.100	0.09683		mg/Kg		97	70 - 130
m-Xylene & p-Xylene	0.200	0.2094		mg/Kg		105	70 - 130
o-Xylene	0.100	0.1057		mg/Kg		106	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	114		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: LCSD 880-2452/2-A
Matrix: Solid
Analysis Batch: 2480

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2452

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	
								RPD	Limit
Benzene	0.100	0.1095		mg/Kg		109	70 - 130	8	35
Toluene	0.100	0.1032		mg/Kg		103	70 - 130	8	35
Ethylbenzene	0.100	0.1016		mg/Kg		102	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.2171		mg/Kg		109	70 - 130	4	35
o-Xylene	0.100	0.1104		mg/Kg		110	70 - 130	4	35

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: MB 880-2456/5-A
Matrix: Solid
Analysis Batch: 2480

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2456

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		04/28/21 14:55	04/29/21 13:58	1

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-592-1
SDG: TE012919259

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

Lab Sample ID: MB 880-2456/5-A
Matrix: Solid
Analysis Batch: 2480

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2456

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.00200	U	0.00200	mg/Kg		04/28/21 14:55	04/29/21 13:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/28/21 14:55	04/29/21 13:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/28/21 14:55	04/29/21 13:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/28/21 14:55	04/29/21 13:58	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/28/21 14:55	04/29/21 13:58	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		04/28/21 14:55	04/29/21 13:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130	04/28/21 14:55	04/29/21 13:58	1
1,4-Difluorobenzene (Surr)	91		70 - 130	04/28/21 14:55	04/29/21 13:58	1

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

Lab Sample ID: MB 880-2505/1-A
Matrix: Solid
Analysis Batch: 2468

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2505

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/29/21 21:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/29/21 21:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/29/21 21:04	1
Total TPH	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/29/21 21:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	04/29/21 16:25	04/29/21 21:04	1
o-Terphenyl	100		70 - 130	04/29/21 16:25	04/29/21 21:04	1

Lab Sample ID: LCS 880-2505/2-A
Matrix: Solid
Analysis Batch: 2468

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2505

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1063		mg/Kg		106	70 - 130
Diesel Range Organics (Over C10-C28)	1000	888.0		mg/Kg		89	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	113		70 - 130
o-Terphenyl	96		70 - 130

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-592-1
SDG: TE012919259

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

Lab Sample ID: LCSD 880-2505/3-A
Matrix: Solid
Analysis Batch: 2468

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2505

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1087		mg/Kg		109	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	867.1		mg/Kg		87	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	96		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2487/1-A
Matrix: Solid
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/30/21 08:39	1

Lab Sample ID: LCS 880-2487/2-A
Matrix: Solid
Analysis Batch: 2513

Client Sample ID: Lab Control Sample
Prep Type: Soluble

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

Lab Sample ID: LCSD 880-2487/3-A
Matrix: Solid
Analysis Batch: 2513

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	250.6		mg/Kg		100	90 - 110	1	20

Lab Sample ID: 890-592-5 MSD
Matrix: Solid
Analysis Batch: 2513

Client Sample ID: FS03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	428	^2	249	642.4		mg/Kg					

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-592-1
SDG: TE012919259

GC VOA

Prep Batch: 2452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-592-1	SW01	Total/NA	Solid	5035	
890-592-2	SW02	Total/NA	Solid	5035	
890-592-3	FS01	Total/NA	Solid	5035	
890-592-4	FS02	Total/NA	Solid	5035	
890-592-5	FS03	Total/NA	Solid	5035	
MB 880-2452/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2452/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2452/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 2456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-2456/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 2480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-592-1	SW01	Total/NA	Solid	8021B	2452
890-592-2	SW02	Total/NA	Solid	8021B	2452
890-592-3	FS01	Total/NA	Solid	8021B	2452
890-592-4	FS02	Total/NA	Solid	8021B	2452
890-592-5	FS03	Total/NA	Solid	8021B	2452
MB 880-2452/5-A	Method Blank	Total/NA	Solid	8021B	2452
MB 880-2456/5-A	Method Blank	Total/NA	Solid	8021B	2456
LCS 880-2452/1-A	Lab Control Sample	Total/NA	Solid	8021B	2452
LCSD 880-2452/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2452

GC Semi VOA

Analysis Batch: 2468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-592-1	SW01	Total/NA	Solid	8015B NM	2505
890-592-2	SW02	Total/NA	Solid	8015B NM	2505
890-592-3	FS01	Total/NA	Solid	8015B NM	2505
890-592-4	FS02	Total/NA	Solid	8015B NM	2505
890-592-5	FS03	Total/NA	Solid	8015B NM	2505
MB 880-2505/1-A	Method Blank	Total/NA	Solid	8015B NM	2505
LCS 880-2505/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2505
LCSD 880-2505/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2505

Prep Batch: 2505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-592-1	SW01	Total/NA	Solid	8015NM Prep	
890-592-2	SW02	Total/NA	Solid	8015NM Prep	
890-592-3	FS01	Total/NA	Solid	8015NM Prep	
890-592-4	FS02	Total/NA	Solid	8015NM Prep	
890-592-5	FS03	Total/NA	Solid	8015NM Prep	
MB 880-2505/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2505/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2505/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-592-1
SDG: TE012919259

HPLC/IC

Leach Batch: 2487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-592-1	SW01	Soluble	Solid	DI Leach	
890-592-2	SW02	Soluble	Solid	DI Leach	
890-592-3	FS01	Soluble	Solid	DI Leach	
890-592-4	FS02	Soluble	Solid	DI Leach	
890-592-5	FS03	Soluble	Solid	DI Leach	
MB 880-2487/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2487/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2487/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-592-5 MS	FS03	Soluble	Solid	DI Leach	
890-592-5 MSD	FS03	Soluble	Solid	DI Leach	

Analysis Batch: 2513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-592-1	SW01	Soluble	Solid	300.0	2487
890-592-2	SW02	Soluble	Solid	300.0	2487
890-592-3	FS01	Soluble	Solid	300.0	2487
890-592-4	FS02	Soluble	Solid	300.0	2487
890-592-5	FS03	Soluble	Solid	300.0	2487
MB 880-2487/1-A	Method Blank	Soluble	Solid	300.0	2487
LCS 880-2487/2-A	Lab Control Sample	Soluble	Solid	300.0	2487
LCSD 880-2487/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2487
890-592-5 MS	FS03	Soluble	Solid	300.0	2487
890-592-5 MSD	FS03	Soluble	Solid	300.0	2487

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-592-1
SDG: TE012919259

Client Sample ID: SW01

Lab Sample ID: 890-592-1

Date Collected: 04/27/21 15:00

Matrix: Solid

Date Received: 04/28/21 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2452	04/29/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2480	04/30/21 05:06	KL	XM
Total/NA	Prep	8015NM Prep			2505	04/29/21 16:25	DM	XM
Total/NA	Analysis	8015B NM		1	2468	04/30/21 04:12	AJ	XM
Soluble	Leach	DI Leach			2487	04/29/21 11:19	CH	XM
Soluble	Analysis	300.0		1	2513	04/30/21 12:33	CH	XM

Client Sample ID: SW02

Lab Sample ID: 890-592-2

Date Collected: 04/27/21 15:15

Matrix: Solid

Date Received: 04/28/21 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2452	04/29/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2480	04/30/21 05:27	KL	XM
Total/NA	Prep	8015NM Prep			2505	04/29/21 16:25	DM	XM
Total/NA	Analysis	8015B NM		1	2468	04/30/21 04:33	AJ	XM
Soluble	Leach	DI Leach			2487	04/29/21 11:19	CH	XM
Soluble	Analysis	300.0		10	2513	04/30/21 10:51	CH	XM

Client Sample ID: FS01

Lab Sample ID: 890-592-3

Date Collected: 04/27/21 15:30

Matrix: Solid

Date Received: 04/28/21 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2452	04/29/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2480	04/30/21 06:48	KL	XM
Total/NA	Prep	8015NM Prep			2505	04/29/21 16:25	DM	XM
Total/NA	Analysis	8015B NM		1	2468	04/30/21 04:55	AJ	XM
Soluble	Leach	DI Leach			2487	04/29/21 11:19	CH	XM
Soluble	Analysis	300.0		1	2513	04/30/21 12:39	CH	XM

Client Sample ID: FS02

Lab Sample ID: 890-592-4

Date Collected: 04/27/21 15:45

Matrix: Solid

Date Received: 04/28/21 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2452	04/29/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2480	04/30/21 07:09	KL	XM
Total/NA	Prep	8015NM Prep			2505	04/29/21 16:25	DM	XM
Total/NA	Analysis	8015B NM		1	2468	04/30/21 05:16	AJ	XM
Soluble	Leach	DI Leach			2487	04/29/21 11:19	CH	XM
Soluble	Analysis	300.0		1	2513	04/30/21 12:44	CH	XM

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
 Project/Site: JRU DI 1

Job ID: 890-592-1
 SDG: TE012919259

Client Sample ID: FS03
Date Collected: 04/27/21 16:00
Date Received: 04/28/21 15:44

Lab Sample ID: 890-592-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2452	04/29/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2480	04/30/21 07:29	KL	XM
Total/NA	Prep	8015NM Prep			2505	04/29/21 16:25	DM	XM
Total/NA	Analysis	8015B NM		1	2468	04/30/21 05:44	AJ	XM
Soluble	Leach	DI Leach			2487	04/29/21 11:19	CH	XM
Soluble	Analysis	300.0		1	2513	04/30/21 12:49	CH	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: JRU DI 1

Job ID: 890-592-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-592-1
SDG: TE012919259

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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

Eurofins Xenco, Carlsbad

Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-592-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-592-1	SW01	Solid	04/27/21 15:00	04/28/21 15:44	0 - 4
890-592-2	SW02	Solid	04/27/21 15:15	04/28/21 15:44	0 - 4
890-592-3	FS01	Solid	04/27/21 15:30	04/28/21 15:44	- 4
890-592-4	FS02	Solid	04/27/21 15:45	04/28/21 15:44	- 4
890-592-5	FS03	Solid	04/27/21 16:00	04/28/21 15:44	- 4

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

Chain of Custody

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager: Dan Moir
 Company Name: LT Environmental, Inc., Permian office
 Address: 3300 North A Street
 City, State ZIP: Midland, TX 79705
 Phone: 432.236.3849
 Email: bbellill@ltenv.com

Bill to: (if different) Kyle Littrell
 Company Name: XTO Energy
 Address: 3104 E Green Street
 City, State ZIP: Carlsbad, NM 88220

Program: UST/PST PRP Brownfields RC Superfund
 State of Project: _____
 Reporting Level: I II III ST/UST RRP I/II/IV
 Deliverables: EDD ADAPT Other: _____

Project Name: 580 OF 1
 Project Number: TE012419259
 P.O. Number: NRM2011155196 & NRM201155196
 Rush: 2/1/HR
 Sampler's Name: Benjamin Bellill
 Due Date: _____

Turn Around: Routine

SAMPLE RECEIPT

Temperature (°C): 22/20
 Received Intact: Yes No
 Cooler Custody Seals: Yes No
 Sample Custody Seals: Yes No
 Total Containers: _____

Temp Blank: Yes No
 Thermometer ID: NRM001
 Wet Ice: Yes No



890-592 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	Sample Comments
SW01	S	4/27/21	1500	0-4"	1	X	X	X	
SW02	S	4/27/21	1515	0-4"	1	X	X	X	
FS01	F	4/27/21	1530	4"	1	X	X	X	
FS02	F	4/27/21	1545	4"	1	X	X	X	
FS03	F	4/27/21	1600	4"	1	X	X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SIO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U 1631 / 245.1 / 7470 / 7471 : Hg

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

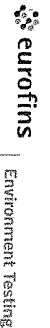
Relinquished by: (Signature) _____ Date/Time: 4:55:23 PM
 Received by: (Signature) _____ Date/Time: _____



Eurofins Xenco, Carlsbad

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

Chain of Custody Record



Environment Testing
 America

Client Information (Sub Contract Lab)		Sampler	Lab PM	Kramer Jessica	Carrier Tracking No(s)	COC No:
Client Contact:	Phone:	E-Mail:	jessica.kramer@eurofinsnet.com		State of Origin	890-190-1
Shipping/Receiving		Accreditations Required (See note)		NELAP - Louisiana NELAP - Texas		Page: 1 of 1
Company	Eurofins Xenco					Page 1 of 1
Address:	1211 W Florida Ave	Due Date Requested	4/30/2021			Job #:
City:	Midland	TAT Requested (days)				890-592-1
State/Zip	TX, 79701					Preservation Codes
Phone:	432-704-5440(Tel)	PO #				A HCL B NaOH C Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Amchlor H Ascorbic Acid I Ice J DI Water K EDTA L EDA M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 Z other (Specify)
Email		MO #				Other:
Project Name	PLU 15 TWR 901H	Project #	89000004			
Site:		SSOW#:				
Sample Identification - Client ID (Lab ID)						
SW01 (890-592-1)	4/27/21	15 00	Mountain	Solid		X
SW02 (890-592-2)	4/27/21	15 15	Mountain	Solid		X
FS01 (890-592-3)	4/27/21	15 30	Mountain	Solid		X
FS02 (890-592-4)	4/27/21	15 45	Mountain	Solid		X
FS03 (890-592-5)	4/27/21	16 00	Mountain	Solid		X
Field Filtered Sample (Yes or No)						
Perform MS/MSD (Yes or No)						
8015MOD_NM/8015NM_S_Prep Full TPH						
300_ORGFM_28D/DL_LEACH Chloride						
8021B/6036FP_Calc BTEX						
Total Number of containers						
Special Instructions/Note:						

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

Possible Hazard Identification
 Unconfirmed

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

Empty Kit Relinquished by _____ Date _____

Relinquished by _____ Date: 4-29-21 Company _____

Relinquished by _____ Date/Time: _____ Company _____

Relinquished by _____ Date/Time: _____ Company _____

Custody Seals Intact Yes No Custody Seal No _____

Cooler Temperature(s) °C and Other Remarks: _____

Special Instructions/QC Requirements: _____

Return To Client Disposal By Lab Archive For _____ Months

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-592-1
SDG Number: TE012919259

Login Number: 592
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-592-1
SDG Number: TE012919259

Login Number: 592
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 04/29/21 04:04 PM

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

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-593-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI 1

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

Attn: Dan Moir

Authorized for release by:
4/30/2021 7:03:05 PM

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



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results through
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www.eurofinsus.com/Env

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

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

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Client: WSP USA Inc.
Project/Site: JRU DI 1

Laboratory Job ID: 890-593-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-593-1
SDG: TE012919259

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, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-593-1
SDG: TE012919259

Job ID: 890-593-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-593-1

Receipt

The samples were received on 4/28/2021 3:44 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.0°C

GC VOA

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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Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-593-1
SDG: TE012919259

Client Sample ID: LDPO4-SW

Lab Sample ID: 890-593-1

Date Collected: 04/26/21 15:25

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: - 5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		04/29/21 11:00	04/30/21 07:50	1
Toluene	<0.00201	U	0.00201	mg/Kg		04/29/21 11:00	04/30/21 07:50	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		04/29/21 11:00	04/30/21 07:50	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		04/29/21 11:00	04/30/21 07:50	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		04/29/21 11:00	04/30/21 07:50	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		04/29/21 11:00	04/30/21 07:50	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		04/29/21 11:00	04/30/21 07:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	04/29/21 11:00	04/30/21 07:50	1
1,4-Difluorobenzene (Surr)	95		70 - 130	04/29/21 11:00	04/30/21 07:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *+	49.9	mg/Kg		04/29/21 16:25	04/29/21 23:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/29/21 23:12	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/29/21 23:12	1
Total TPH	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/29/21 23:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	04/29/21 16:25	04/29/21 23:12	1
o-Terphenyl	101		70 - 130	04/29/21 16:25	04/29/21 23:12	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1960		50.4	mg/Kg			04/30/21 11:23	10

Client Sample ID: LDPO4B-SW

Lab Sample ID: 890-593-2

Date Collected: 04/26/21 15:25

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: - 13

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		04/29/21 11:00	04/30/21 08:10	1
Toluene	<0.00201	U	0.00201	mg/Kg		04/29/21 11:00	04/30/21 08:10	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		04/29/21 11:00	04/30/21 08:10	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		04/29/21 11:00	04/30/21 08:10	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		04/29/21 11:00	04/30/21 08:10	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		04/29/21 11:00	04/30/21 08:10	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		04/29/21 11:00	04/30/21 08:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	04/29/21 11:00	04/30/21 08:10	1
1,4-Difluorobenzene (Surr)	95		70 - 130	04/29/21 11:00	04/30/21 08:10	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-593-1
SDG: TE012919259

Client Sample ID: LDPO4B-SW

Lab Sample ID: 890-593-2

Date Collected: 04/26/21 15:25

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: - 13

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *+	49.8	mg/Kg		04/29/21 16:25	04/29/21 23:33	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		04/29/21 16:25	04/29/21 23:33	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		04/29/21 16:25	04/29/21 23:33	1
Total TPH	<49.8	U	49.8	mg/Kg		04/29/21 16:25	04/29/21 23:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	04/29/21 16:25	04/29/21 23:33	1
o-Terphenyl	89		70 - 130	04/29/21 16:25	04/29/21 23:33	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18.1	^2	4.97	mg/Kg			04/30/21 13:05	1

Client Sample ID: LDPO5-SW

Lab Sample ID: 890-593-3

Date Collected: 04/26/21 14:00

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: - 5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		04/29/21 11:00	04/30/21 08:30	1
Toluene	<0.00201	U	0.00201	mg/Kg		04/29/21 11:00	04/30/21 08:30	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		04/29/21 11:00	04/30/21 08:30	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		04/29/21 11:00	04/30/21 08:30	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		04/29/21 11:00	04/30/21 08:30	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		04/29/21 11:00	04/30/21 08:30	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		04/29/21 11:00	04/30/21 08:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	04/29/21 11:00	04/30/21 08:30	1
1,4-Difluorobenzene (Surr)	98		70 - 130	04/29/21 11:00	04/30/21 08:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *+	49.9	mg/Kg		04/29/21 16:25	04/29/21 23:55	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/29/21 23:55	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/29/21 23:55	1
Total TPH	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/29/21 23:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130	04/29/21 16:25	04/29/21 23:55	1
o-Terphenyl	92		70 - 130	04/29/21 16:25	04/29/21 23:55	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.0		4.95	mg/Kg			04/30/21 11:45	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-593-1
SDG: TE012919259

Client Sample ID: LDPO6-SW

Lab Sample ID: 890-593-4

Date Collected: 04/27/21 09:40

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: - 5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/29/21 11:00	04/30/21 08:51	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/29/21 11:00	04/30/21 08:51	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/29/21 11:00	04/30/21 08:51	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/29/21 11:00	04/30/21 08:51	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/29/21 11:00	04/30/21 08:51	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/29/21 11:00	04/30/21 08:51	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		04/29/21 11:00	04/30/21 08:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	04/29/21 11:00	04/30/21 08:51	1
1,4-Difluorobenzene (Surr)	91		70 - 130	04/29/21 11:00	04/30/21 08:51	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U **	50.0	mg/Kg		04/29/21 16:25	04/30/21 00:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 00:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 00:16	1
Total TPH	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 00:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130	04/29/21 16:25	04/30/21 00:16	1
o-Terphenyl	93		70 - 130	04/29/21 16:25	04/30/21 00:16	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	107	^2	5.05	mg/Kg			04/30/21 13:11	1

Client Sample ID: LDP06B-SW

Lab Sample ID: 890-593-5

Date Collected: 04/27/21 10:00

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: - 13

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 09:11	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 09:11	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 09:11	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/29/21 11:00	04/30/21 09:11	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 09:11	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/29/21 11:00	04/30/21 09:11	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		04/29/21 11:00	04/30/21 09:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130	04/29/21 11:00	04/30/21 09:11	1
1,4-Difluorobenzene (Surr)	92		70 - 130	04/29/21 11:00	04/30/21 09:11	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-593-1
SDG: TE012919259

Client Sample ID: LDP06B-SW

Lab Sample ID: 890-593-5

Date Collected: 04/27/21 10:00

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: - 13

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U **	50.0	mg/Kg		04/29/21 16:25	04/30/21 00:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 00:38	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 00:38	1
Total TPH	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 00:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130	04/29/21 16:25	04/30/21 00:38	1
o-Terphenyl	93		70 - 130	04/29/21 16:25	04/30/21 00:38	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	115	^2	5.05	mg/Kg			04/30/21 13:16	1

Client Sample ID: LDP07-SW

Lab Sample ID: 890-593-6

Date Collected: 04/27/21 09:00

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: - 5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 09:32	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 09:32	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 09:32	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/29/21 11:00	04/30/21 09:32	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 09:32	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/29/21 11:00	04/30/21 09:32	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		04/29/21 11:00	04/30/21 09:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	04/29/21 11:00	04/30/21 09:32	1
1,4-Difluorobenzene (Surr)	94		70 - 130	04/29/21 11:00	04/30/21 09:32	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U **	50.0	mg/Kg		04/29/21 16:25	04/30/21 00:59	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 00:59	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 00:59	1
Total TPH	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/30/21 00:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130	04/29/21 16:25	04/30/21 00:59	1
o-Terphenyl	94		70 - 130	04/29/21 16:25	04/30/21 00:59	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	892		49.8	mg/Kg			04/30/21 12:01	10

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-593-1
SDG: TE012919259

Client Sample ID: LDP07B-SW

Lab Sample ID: 890-593-7

Date Collected: 04/27/21 09:20

Matrix: Solid

Date Received: 04/28/21 15:44

Sample Depth: - 13

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		04/29/21 11:00	04/30/21 09:52	1
Toluene	<0.00198	U	0.00198	mg/Kg		04/29/21 11:00	04/30/21 09:52	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		04/29/21 11:00	04/30/21 09:52	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		04/29/21 11:00	04/30/21 09:52	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		04/29/21 11:00	04/30/21 09:52	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		04/29/21 11:00	04/30/21 09:52	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		04/29/21 11:00	04/30/21 09:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	04/29/21 11:00	04/30/21 09:52	1
1,4-Difluorobenzene (Surr)	92		70 - 130	04/29/21 11:00	04/30/21 09:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *+	49.9	mg/Kg		04/29/21 16:25	04/30/21 01:21	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/30/21 01:21	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/30/21 01:21	1
Total TPH	<49.9	U	49.9	mg/Kg		04/29/21 16:25	04/30/21 01:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130	04/29/21 16:25	04/30/21 01:21	1
o-Terphenyl	80		70 - 130	04/29/21 16:25	04/30/21 01:21	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.9	^2	5.00	mg/Kg			04/30/21 13:21	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-593-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-593-1	LDPO4-SW	106	95
890-593-2	LDPO4B-SW	103	95
890-593-3	LDPO5-SW	107	98
890-593-4	LDPO6-SW	98	91
890-593-5	LDP06B-SW	90	92
890-593-6	LDP07-SW	95	94
890-593-7	LDP07B-SW	98	92
LCS 880-2452/1-A	Lab Control Sample	114	102
LCSD 880-2452/2-A	Lab Control Sample Dup	110	102
MB 880-2452/5-A	Method Blank	95	92
MB 880-2456/5-A	Method Blank	90	91

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-593-1	LDPO4-SW	107	101
890-593-2	LDPO4B-SW	97	89
890-593-3	LDPO5-SW	99	92
890-593-4	LDPO6-SW	100	93
890-593-5	LDP06B-SW	101	93
890-593-6	LDP07-SW	101	94
890-593-7	LDP07B-SW	88	80
LCS 880-2505/2-A	Lab Control Sample	113	96
LCSD 880-2505/3-A	Lab Control Sample Dup	111	96
MB 880-2505/1-A	Method Blank	107	100

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-593-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2452/5-A
Matrix: Solid
Analysis Batch: 2480

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2452

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/29/21 11:00	04/30/21 02:01	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		04/29/21 11:00	04/30/21 02:01	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	95		70 - 130	04/29/21 11:00	04/30/21 02:01	1
1,4-Difluorobenzene (Surr)	92		70 - 130	04/29/21 11:00	04/30/21 02:01	1

Lab Sample ID: LCS 880-2452/1-A
Matrix: Solid
Analysis Batch: 2480

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2452

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Benzene	0.100	0.1008		mg/Kg		101	70 - 130	
Toluene	0.100	0.09564		mg/Kg		96	70 - 130	
Ethylbenzene	0.100	0.09683		mg/Kg		97	70 - 130	
m-Xylene & p-Xylene	0.200	0.2094		mg/Kg		105	70 - 130	
o-Xylene	0.100	0.1057		mg/Kg		106	70 - 130	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	114		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: LCSD 880-2452/2-A
Matrix: Solid
Analysis Batch: 2480

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2452

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD Limit	
									RPD	Limit
Benzene	0.100	0.1095		mg/Kg		109	70 - 130	8	35	
Toluene	0.100	0.1032		mg/Kg		103	70 - 130	8	35	
Ethylbenzene	0.100	0.1016		mg/Kg		102	70 - 130	5	35	
m-Xylene & p-Xylene	0.200	0.2171		mg/Kg		109	70 - 130	4	35	
o-Xylene	0.100	0.1104		mg/Kg		110	70 - 130	4	35	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: MB 880-2456/5-A
Matrix: Solid
Analysis Batch: 2480

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2456

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		04/28/21 14:55	04/29/21 13:58	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-593-1
SDG: TE012919259

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

Lab Sample ID: MB 880-2456/5-A
Matrix: Solid
Analysis Batch: 2480Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2456

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.00200	U	0.00200	mg/Kg		04/28/21 14:55	04/29/21 13:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/28/21 14:55	04/29/21 13:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/28/21 14:55	04/29/21 13:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/28/21 14:55	04/29/21 13:58	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/28/21 14:55	04/29/21 13:58	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		04/28/21 14:55	04/29/21 13:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130	04/28/21 14:55	04/29/21 13:58	1
1,4-Difluorobenzene (Surr)	91		70 - 130	04/28/21 14:55	04/29/21 13:58	1

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

Lab Sample ID: MB 880-2505/1-A
Matrix: Solid
Analysis Batch: 2468Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2505

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	207.5		50.0	mg/Kg		04/29/21 16:25	04/29/21 21:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/29/21 21:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/29/21 16:25	04/29/21 21:04	1
Total TPH	207.5		50.0	mg/Kg		04/29/21 16:25	04/29/21 21:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	04/29/21 16:25	04/29/21 21:04	1
o-Terphenyl	100		70 - 130	04/29/21 16:25	04/29/21 21:04	1

Lab Sample ID: LCS 880-2505/2-A
Matrix: Solid
Analysis Batch: 2468Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2505

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1329	*+	mg/Kg		133	70 - 130
Diesel Range Organics (Over C10-C28)	1000	888.0		mg/Kg		89	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	113		70 - 130
o-Terphenyl	96		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-593-1
SDG: TE012919259

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

Lab Sample ID: LCSD 880-2505/3-A
Matrix: Solid
Analysis Batch: 2468

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2505

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1087		mg/Kg		109	70 - 130	20	20
Diesel Range Organics (Over C10-C28)	1000	867.1		mg/Kg		87	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	96		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2487/1-A
Matrix: Solid
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/30/21 08:39	1

Lab Sample ID: LCS 880-2487/2-A
Matrix: Solid
Analysis Batch: 2513

Client Sample ID: Lab Control Sample
Prep Type: Soluble

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

Lab Sample ID: LCSD 880-2487/3-A
Matrix: Solid
Analysis Batch: 2513

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	250.6		mg/Kg		100	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-593-1
SDG: TE012919259

GC VOA

Prep Batch: 2452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-593-1	LDPO4-SW	Total/NA	Solid	5035	
890-593-2	LDPO4B-SW	Total/NA	Solid	5035	
890-593-3	LDPO5-SW	Total/NA	Solid	5035	
890-593-4	LDPO6-SW	Total/NA	Solid	5035	
890-593-5	LDP06B-SW	Total/NA	Solid	5035	
890-593-6	LDP07-SW	Total/NA	Solid	5035	
890-593-7	LDP07B-SW	Total/NA	Solid	5035	
MB 880-2452/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2452/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2452/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 2456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-2456/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 2480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-593-1	LDPO4-SW	Total/NA	Solid	8021B	2452
890-593-2	LDPO4B-SW	Total/NA	Solid	8021B	2452
890-593-3	LDPO5-SW	Total/NA	Solid	8021B	2452
890-593-4	LDPO6-SW	Total/NA	Solid	8021B	2452
890-593-5	LDP06B-SW	Total/NA	Solid	8021B	2452
890-593-6	LDP07-SW	Total/NA	Solid	8021B	2452
890-593-7	LDP07B-SW	Total/NA	Solid	8021B	2452
MB 880-2452/5-A	Method Blank	Total/NA	Solid	8021B	2452
MB 880-2456/5-A	Method Blank	Total/NA	Solid	8021B	2456
LCS 880-2452/1-A	Lab Control Sample	Total/NA	Solid	8021B	2452
LCSD 880-2452/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2452

GC Semi VOA

Analysis Batch: 2468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-593-1	LDPO4-SW	Total/NA	Solid	8015B NM	2505
890-593-2	LDPO4B-SW	Total/NA	Solid	8015B NM	2505
890-593-3	LDPO5-SW	Total/NA	Solid	8015B NM	2505
890-593-4	LDPO6-SW	Total/NA	Solid	8015B NM	2505
890-593-5	LDP06B-SW	Total/NA	Solid	8015B NM	2505
890-593-6	LDP07-SW	Total/NA	Solid	8015B NM	2505
890-593-7	LDP07B-SW	Total/NA	Solid	8015B NM	2505
MB 880-2505/1-A	Method Blank	Total/NA	Solid	8015B NM	2505
LCS 880-2505/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2505
LCSD 880-2505/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2505

Prep Batch: 2505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-593-1	LDPO4-SW	Total/NA	Solid	8015NM Prep	
890-593-2	LDPO4B-SW	Total/NA	Solid	8015NM Prep	
890-593-3	LDPO5-SW	Total/NA	Solid	8015NM Prep	
890-593-4	LDPO6-SW	Total/NA	Solid	8015NM Prep	
890-593-5	LDP06B-SW	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-593-1
SDG: TE012919259

GC Semi VOA (Continued)

Prep Batch: 2505 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-593-6	LDP07-SW	Total/NA	Solid	8015NM Prep	
890-593-7	LDP07B-SW	Total/NA	Solid	8015NM Prep	
MB 880-2505/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2505/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2505/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 2487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-593-1	LDPO4-SW	Soluble	Solid	DI Leach	
890-593-2	LDPO4B-SW	Soluble	Solid	DI Leach	
890-593-3	LDPO5-SW	Soluble	Solid	DI Leach	
890-593-4	LDPO6-SW	Soluble	Solid	DI Leach	
890-593-5	LDP06B-SW	Soluble	Solid	DI Leach	
890-593-6	LDP07-SW	Soluble	Solid	DI Leach	
890-593-7	LDP07B-SW	Soluble	Solid	DI Leach	
MB 880-2487/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2487/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2487/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 2513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-593-1	LDPO4-SW	Soluble	Solid	300.0	2487
890-593-2	LDPO4B-SW	Soluble	Solid	300.0	2487
890-593-3	LDPO5-SW	Soluble	Solid	300.0	2487
890-593-4	LDPO6-SW	Soluble	Solid	300.0	2487
890-593-5	LDP06B-SW	Soluble	Solid	300.0	2487
890-593-6	LDP07-SW	Soluble	Solid	300.0	2487
890-593-7	LDP07B-SW	Soluble	Solid	300.0	2487
MB 880-2487/1-A	Method Blank	Soluble	Solid	300.0	2487
LCS 880-2487/2-A	Lab Control Sample	Soluble	Solid	300.0	2487
LCSD 880-2487/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2487

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-593-1
SDG: TE012919259

Client Sample ID: LDPO4-SW

Lab Sample ID: 890-593-1

Date Collected: 04/26/21 15:25

Matrix: Solid

Date Received: 04/28/21 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2452	04/29/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2480	04/30/21 07:50	KL	XM
Total/NA	Prep	8015NM Prep			2505	04/29/21 16:25	DM	XM
Total/NA	Analysis	8015B NM		1	2468	04/29/21 23:12	AJ	XM
Soluble	Leach	DI Leach			2487	04/29/21 11:19	CH	XM
Soluble	Analysis	300.0		10	2513	04/30/21 11:23	CH	XM

Client Sample ID: LDPO4B-SW

Lab Sample ID: 890-593-2

Date Collected: 04/26/21 15:25

Matrix: Solid

Date Received: 04/28/21 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2452	04/29/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2480	04/30/21 08:10	KL	XM
Total/NA	Prep	8015NM Prep			2505	04/29/21 16:25	DM	XM
Total/NA	Analysis	8015B NM		1	2468	04/29/21 23:33	AJ	XM
Soluble	Leach	DI Leach			2487	04/29/21 11:19	CH	XM
Soluble	Analysis	300.0		1	2513	04/30/21 13:05	CH	XM

Client Sample ID: LDPO5-SW

Lab Sample ID: 890-593-3

Date Collected: 04/26/21 14:00

Matrix: Solid

Date Received: 04/28/21 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2452	04/29/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2480	04/30/21 08:30	KL	XM
Total/NA	Prep	8015NM Prep			2505	04/29/21 16:25	DM	XM
Total/NA	Analysis	8015B NM		1	2468	04/29/21 23:55	AJ	XM
Soluble	Leach	DI Leach			2487	04/29/21 11:19	CH	XM
Soluble	Analysis	300.0		1	2513	04/30/21 11:45	CH	XM

Client Sample ID: LDPO6-SW

Lab Sample ID: 890-593-4

Date Collected: 04/27/21 09:40

Matrix: Solid

Date Received: 04/28/21 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2452	04/29/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2480	04/30/21 08:51	KL	XM
Total/NA	Prep	8015NM Prep			2505	04/29/21 16:25	DM	XM
Total/NA	Analysis	8015B NM		1	2468	04/30/21 00:16	AJ	XM
Soluble	Leach	DI Leach			2487	04/29/21 11:19	CH	XM
Soluble	Analysis	300.0		1	2513	04/30/21 13:11	CH	XM

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Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-593-1
SDG: TE012919259

Client Sample ID: LDP06B-SW

Lab Sample ID: 890-593-5

Date Collected: 04/27/21 10:00

Matrix: Solid

Date Received: 04/28/21 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2452	04/29/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2480	04/30/21 09:11	KL	XM
Total/NA	Prep	8015NM Prep			2505	04/29/21 16:25	DM	XM
Total/NA	Analysis	8015B NM		1	2468	04/30/21 00:38	AJ	XM
Soluble	Leach	DI Leach			2487	04/29/21 11:19	CH	XM
Soluble	Analysis	300.0		1	2513	04/30/21 13:16	CH	XM

Client Sample ID: LDP07-SW

Lab Sample ID: 890-593-6

Date Collected: 04/27/21 09:00

Matrix: Solid

Date Received: 04/28/21 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2452	04/29/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2480	04/30/21 09:32	KL	XM
Total/NA	Prep	8015NM Prep			2505	04/29/21 16:25	DM	XM
Total/NA	Analysis	8015B NM		1	2468	04/30/21 00:59	AJ	XM
Soluble	Leach	DI Leach			2487	04/29/21 11:19	CH	XM
Soluble	Analysis	300.0		10	2513	04/30/21 12:01	CH	XM

Client Sample ID: LDP07B-SW

Lab Sample ID: 890-593-7

Date Collected: 04/27/21 09:20

Matrix: Solid

Date Received: 04/28/21 15:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2452	04/29/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2480	04/30/21 09:52	KL	XM
Total/NA	Prep	8015NM Prep			2505	04/29/21 16:25	DM	XM
Total/NA	Analysis	8015B NM		1	2468	04/30/21 01:21	AJ	XM
Soluble	Leach	DI Leach			2487	04/29/21 11:19	CH	XM
Soluble	Analysis	300.0		1	2513	04/30/21 13:21	CH	XM

Laboratory References:

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

Eurofins Xenco, Carlsbad

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-593-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-593-1
SDG: TE012919259

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-593-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-593-1	LDPO4-SW	Solid	04/26/21 15:25	04/28/21 15:44	- 5
890-593-2	LDPO4B-SW	Solid	04/26/21 15:25	04/28/21 15:44	- 13
890-593-3	LDPO5-SW	Solid	04/26/21 14:00	04/28/21 15:44	- 5
890-593-4	LDPO6-SW	Solid	04/27/21 09:40	04/28/21 15:44	- 5
890-593-5	LDP06B-SW	Solid	04/27/21 10:00	04/28/21 15:44	- 13
890-593-6	LDP07-SW	Solid	04/27/21 09:00	04/28/21 15:44	- 5
890-593-7	LDP07B-SW	Solid	04/27/21 09:20	04/28/21 15:44	- 13

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- 11
- 12
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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)595-3443 Lubbock, TX (806)794-1296
Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

Chain of Custody

Work Order No: _____

Project Manager: Dan Moir
Company Name: LT Environmental, Inc., Permian office
Address: 3300 North A Street
City, State ZIP: Midland, TX 79705
Phone: 432.236.3849
Bill to: (if different) Kyle Littrell
Company Name: XTO Energy
Address: 3104 E Green Street
City, State ZIP: Carlsbad, NM 88220
Email: hbellill@ltenv.com

Program: UST/PST RRP Brownfields RC Superfund
State of Project: Level II Level III ST/UST RRP Level IV
Reporting Level: EDD ADAPT Other:
Deliverables: EDD ADAPT Other:
Work Order Comments: _____
Work Order Notes: _____

Project Name: 380 DI 1
Project Number: FE012919259
P.O. Number: _____
Sampler's Name: Benjamin Bellill
Turn Around: Routine
Rush: HR
Temp Blank: Yes No
Temperature (°C): 21.20
Thermometer ID: TMM-007
Received Inact: Yes No
Cooler Custody Seals: Yes No
Sample Custody Seals: Yes No
Correction Factor: _____
Total Containers: _____
Well loc: Yes No
Due Date: _____

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
LDP04-SW	S	4/26/21	1525	5'	1	✓	✓	✓	
LDP04R-SW			1625	13'	1	✓	✓	✓	
LDP05-SW			1400	5'	1	✓	✓	✓	
LDP06-SW		4/27/21	0940	5'	1	✓	✓	✓	
LDP06B-SW			1000	13'	1	✓	✓	✓	
LDP07-SW			0900	5'	1	✓	✓	✓	
LDP07B-SW			0920	13'	1	✓	✓	✓	

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

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

Relinquished by: (Signature) _____ Received by: (Signature) _____ Date/Time: 4.28.21 1544
Relinquished by: (Signature) _____ Received by: (Signature) _____ Date/Time: _____

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Eurofins Xenco, Carlsbad

Chain of Custody Record



eurofins
Environment Testing
America

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

Client Information (Sub Contract Lab)

Client Contact: _____
Shipping/Receiving _____

Company: Eurofins Xenco

Address: 1211 W Florida Ave
City: Midland
State, Zip: TX, 79701

Phone: 432-704-5440(Tel)
Email: _____

Project Name: JRU DI 1
Site: _____

Sampler: _____
Phone: _____
E-Mail: jessica.kramer@eurofins.com

Lab PM: Kramer Jessica

Due Date Requested: 4/30/2021
TAT Requested (days): _____

PO #: _____
WO #: _____
Project #: 89000004
SSOV#: _____

Carrier Tracking No(s): _____
State of Origin: New Mexico

Accreditations Required (See note): NELAP - Louisiana NELAP - Texas

Analysis Requested: _____

COCC No: 890-190-1
Page: Page 1 of 1
Job #: 890-593-1

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2SO3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4.5
Z - other (specify)

Sample Identification - Client ID (Lab ID)

Sample ID	Sample Date	Sample Time	Sample Type (G=Comp, G=grab)	Matrix (Water, Soil, Other)	Preservation Code
LDP04-SW (890-593-1)	4/26/21	15 25	Mountain	Solid	
LDP04B-SW (890-593-2)	4/26/21	15 25	Mountain	Solid	
LDP05-SW (890-593-3)	4/26/21	14 00	Mountain	Solid	
LDP06-SW (890-593-4)	4/27/21	09 40	Mountain	Solid	
LDP06B-SW (890-593-5)	4/27/21	10 00	Mountain	Solid	
LDP07-SW (890-593-6)	4/27/21	09 00	Mountain	Solid	
LDP07B-SW (890-593-7)	4/27/21	09 20	Mountain	Solid	

Field Filtered Sample (Yes or No)

Perform MS/MSD (Yes or No)

Sample ID	Field Filtered	MS/MSD
LDP04-SW	X	X
LDP04B-SW	X	X
LDP05-SW	X	X
LDP06-SW	X	X
LDP06B-SW	X	X
LDP07-SW	X	X
LDP07B-SW	X	X

Total Number of containers: _____

Special Instructions/Note: _____

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

Possible Hazard Identification

Unconfirmed Deliverable Requested I II III IV Other (specify) _____

Empty Kit Relinquished by _____

Relinquished by: _____
Date/Time: 4-26-21

Relinquished by: _____
Date/Time: _____

Custody Seals Intact: _____
Custody Seal No: _____

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

Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements: _____

Method of Shipment: _____

Received by: _____
Date/Time: 4/26/21

Received by: _____
Date/Time: _____

Cooler Temperature(s) °C and Other Remarks: _____



Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-612-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU D11

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

Attn: Dan Moir

Authorized for release by:
5/4/2021 4:09:41 PM

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



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

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

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- 13
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Client: WSP USA Inc.
Project/Site: JRU DI1

Laboratory Job ID: 890-612-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU D11

Job ID: 890-612-1
SDG: TE012919259

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high 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.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-612-1
SDG: TE012919259

Job ID: 890-612-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-612-1

Receipt

The samples were received on 5/3/2021 9:37 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 1.8°C

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: FS05 (890-612-1), FS06 (890-612-2), FS07 (890-612-3), FS08 (890-612-4), FS09 (890-612-5), SW03 (890-612-6), SW04 (890-612-7), SW05 (890-612-8), SW06 (890-612-9), SW07 (890-612-10) and SW08 (890-612-11).

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.

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Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU D11Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: FS05

Lab Sample ID: 890-612-1

Date Collected: 04/30/21 09:30

Matrix: Solid

Date Received: 05/03/21 09:37

Sample Depth: - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/03/21 10:04	05/04/21 09:35	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/03/21 10:04	05/04/21 09:35	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/03/21 10:04	05/04/21 09:35	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/03/21 10:04	05/04/21 09:35	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/03/21 10:04	05/04/21 09:35	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/03/21 10:04	05/04/21 09:35	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/03/21 10:04	05/04/21 09:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	05/03/21 10:04	05/04/21 09:35	1
1,4-Difluorobenzene (Surr)	131	S1+	70 - 130	05/03/21 10:04	05/04/21 09:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 16:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 16:51	1
Oil Range Organics (Over C28-C36)	70.6		50.0	mg/Kg		05/03/21 10:07	05/03/21 16:51	1
Total TPH	70.6		50.0	mg/Kg		05/03/21 10:07	05/03/21 16:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	132	S1+	70 - 130	05/03/21 10:07	05/03/21 16:51	1
o-Terphenyl	124		70 - 130	05/03/21 10:07	05/03/21 16:51	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	55.6		5.03	mg/Kg			05/04/21 02:35	1

Client Sample ID: FS06

Lab Sample ID: 890-612-2

Date Collected: 04/30/21 09:45

Matrix: Solid

Date Received: 05/03/21 09:37

Sample Depth: - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/03/21 10:04	05/04/21 09:56	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/03/21 10:04	05/04/21 09:56	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/03/21 10:04	05/04/21 09:56	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		05/03/21 10:04	05/04/21 09:56	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/03/21 10:04	05/04/21 09:56	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		05/03/21 10:04	05/04/21 09:56	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		05/03/21 10:04	05/04/21 09:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	05/03/21 10:04	05/04/21 09:56	1
1,4-Difluorobenzene (Surr)	110		70 - 130	05/03/21 10:04	05/04/21 09:56	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU D11Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: FS06

Lab Sample ID: 890-612-2

Date Collected: 04/30/21 09:45

Matrix: Solid

Date Received: 05/03/21 09:37

Sample Depth: - 2

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 17:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 17:12	1
Oil Range Organics (Over C28-C36)	50.2		50.0	mg/Kg		05/03/21 10:07	05/03/21 17:12	1
Total TPH	50.2		50.0	mg/Kg		05/03/21 10:07	05/03/21 17:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	120		70 - 130	05/03/21 10:07	05/03/21 17:12	1
o-Terphenyl	114		70 - 130	05/03/21 10:07	05/03/21 17:12	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25.2		4.98	mg/Kg			05/04/21 02:40	1

Client Sample ID: FS07

Lab Sample ID: 890-612-3

Date Collected: 04/30/21 10:00

Matrix: Solid

Date Received: 05/03/21 09:37

Sample Depth: - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/03/21 10:04	05/04/21 10:16	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/03/21 10:04	05/04/21 10:16	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/03/21 10:04	05/04/21 10:16	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		05/03/21 10:04	05/04/21 10:16	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/03/21 10:04	05/04/21 10:16	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		05/03/21 10:04	05/04/21 10:16	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		05/03/21 10:04	05/04/21 10:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	05/03/21 10:04	05/04/21 10:16	1
1,4-Difluorobenzene (Surr)	121		70 - 130	05/03/21 10:04	05/04/21 10:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 17:33	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 17:33	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 17:33	1
Total TPH	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 17:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130	05/03/21 10:07	05/03/21 17:33	1
o-Terphenyl	105		70 - 130	05/03/21 10:07	05/03/21 17:33	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	30.3		5.05	mg/Kg			05/04/21 02:45	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: FS08

Lab Sample ID: 890-612-4

Date Collected: 04/30/21 10:20

Matrix: Solid

Date Received: 05/03/21 09:37

Sample Depth: - 4.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/03/21 10:04	05/04/21 10:37	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/03/21 10:04	05/04/21 10:37	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/03/21 10:04	05/04/21 10:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/03/21 10:04	05/04/21 10:37	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/03/21 10:04	05/04/21 10:37	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/03/21 10:04	05/04/21 10:37	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/03/21 10:04	05/04/21 10:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	05/03/21 10:04	05/04/21 10:37	1
1,4-Difluorobenzene (Surr)	108		70 - 130	05/03/21 10:04	05/04/21 10:37	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/03/21 10:07	05/03/21 17:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/03/21 10:07	05/03/21 17:54	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/03/21 10:07	05/03/21 17:54	1
Total TPH	<49.9	U	49.9	mg/Kg		05/03/21 10:07	05/03/21 17:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	126		70 - 130	05/03/21 10:07	05/03/21 17:54	1
o-Terphenyl	119		70 - 130	05/03/21 10:07	05/03/21 17:54	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.17		5.05	mg/Kg			05/04/21 02:51	1

Client Sample ID: FS09

Lab Sample ID: 890-612-5

Date Collected: 04/30/21 10:30

Matrix: Solid

Date Received: 05/03/21 09:37

Sample Depth: - 4.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/04/21 08:30	05/04/21 12:05	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/04/21 08:30	05/04/21 12:05	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/04/21 08:30	05/04/21 12:05	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/04/21 08:30	05/04/21 12:05	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/04/21 08:30	05/04/21 12:05	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/04/21 08:30	05/04/21 12:05	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/04/21 08:30	05/04/21 12:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130	05/04/21 08:30	05/04/21 12:05	1
1,4-Difluorobenzene (Surr)	97		70 - 130	05/04/21 08:30	05/04/21 12:05	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU D11Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: FS09

Lab Sample ID: 890-612-5

Date Collected: 04/30/21 10:30

Matrix: Solid

Date Received: 05/03/21 09:37

Sample Depth: - 4.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/03/21 10:07	05/03/21 18:15	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/03/21 10:07	05/03/21 18:15	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/03/21 10:07	05/03/21 18:15	1
Total TPH	<49.9	U	49.9	mg/Kg		05/03/21 10:07	05/03/21 18:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	120		70 - 130	05/03/21 10:07	05/03/21 18:15	1
o-Terphenyl	110		70 - 130	05/03/21 10:07	05/03/21 18:15	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.05		4.98	mg/Kg			05/04/21 03:07	1

Client Sample ID: SW03

Lab Sample ID: 890-612-6

Date Collected: 04/30/21 11:00

Matrix: Solid

Date Received: 05/03/21 09:37

Sample Depth: 0 - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/04/21 08:30	05/04/21 12:25	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/04/21 08:30	05/04/21 12:25	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/04/21 08:30	05/04/21 12:25	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		05/04/21 08:30	05/04/21 12:25	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/04/21 08:30	05/04/21 12:25	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		05/04/21 08:30	05/04/21 12:25	1
Total BTEX	<0.00403	U	0.00403	mg/Kg		05/04/21 08:30	05/04/21 12:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	05/04/21 08:30	05/04/21 12:25	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/04/21 08:30	05/04/21 12:25	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 18:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 18:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 18:36	1
Total TPH	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 18:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130	05/03/21 10:07	05/03/21 18:36	1
o-Terphenyl	105		70 - 130	05/03/21 10:07	05/03/21 18:36	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34.1		5.00	mg/Kg			05/04/21 03:12	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: SW04

Lab Sample ID: 890-612-7

Date Collected: 04/30/21 11:30

Matrix: Solid

Date Received: 05/03/21 09:37

Sample Depth: 0 - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/04/21 08:30	05/04/21 12:45	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/04/21 08:30	05/04/21 12:45	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/04/21 08:30	05/04/21 12:45	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		05/04/21 08:30	05/04/21 12:45	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/04/21 08:30	05/04/21 12:45	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		05/04/21 08:30	05/04/21 12:45	1
Total BTEX	<0.00403	U	0.00403	mg/Kg		05/04/21 08:30	05/04/21 12:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	05/04/21 08:30	05/04/21 12:45	1
1,4-Difluorobenzene (Surr)	94		70 - 130	05/04/21 08:30	05/04/21 12:45	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/03/21 10:07	05/03/21 18:58	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/03/21 10:07	05/03/21 18:58	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/03/21 10:07	05/03/21 18:58	1
Total TPH	<49.9	U	49.9	mg/Kg		05/03/21 10:07	05/03/21 18:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130	05/03/21 10:07	05/03/21 18:58	1
o-Terphenyl	108		70 - 130	05/03/21 10:07	05/03/21 18:58	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	120		4.96	mg/Kg			05/04/21 03:28	1

Client Sample ID: SW05

Lab Sample ID: 890-612-8

Date Collected: 04/30/21 12:00

Matrix: Solid

Date Received: 05/03/21 09:37

Sample Depth: 0 - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/04/21 08:30	05/04/21 13:06	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/04/21 08:30	05/04/21 13:06	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/04/21 08:30	05/04/21 13:06	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/04/21 08:30	05/04/21 13:06	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/04/21 08:30	05/04/21 13:06	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/04/21 08:30	05/04/21 13:06	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/04/21 08:30	05/04/21 13:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	05/04/21 08:30	05/04/21 13:06	1
1,4-Difluorobenzene (Surr)	94		70 - 130	05/04/21 08:30	05/04/21 13:06	1

Euofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU D11Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: SW05

Lab Sample ID: 890-612-8

Date Collected: 04/30/21 12:00

Matrix: Solid

Date Received: 05/03/21 09:37

Sample Depth: 0 - 2

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 19:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 19:19	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 19:19	1
Total TPH	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 19:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	121		70 - 130	05/03/21 10:07	05/03/21 19:19	1
o-Terphenyl	116		70 - 130	05/03/21 10:07	05/03/21 19:19	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	83.5		5.00	mg/Kg			05/04/21 03:34	1

Client Sample ID: SW06

Lab Sample ID: 890-612-9

Date Collected: 04/30/21 13:00

Matrix: Solid

Date Received: 05/03/21 09:37

Sample Depth: 0 - 2

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/04/21 08:30	05/04/21 13:26	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/04/21 08:30	05/04/21 13:26	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/04/21 08:30	05/04/21 13:26	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/04/21 08:30	05/04/21 13:26	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/04/21 08:30	05/04/21 13:26	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/04/21 08:30	05/04/21 13:26	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/04/21 08:30	05/04/21 13:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130	05/04/21 08:30	05/04/21 13:26	1
1,4-Difluorobenzene (Surr)	89		70 - 130	05/04/21 08:30	05/04/21 13:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/03/21 10:04	05/03/21 18:15	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/03/21 10:04	05/03/21 18:15	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/03/21 10:04	05/03/21 18:15	1
Total TPH	<49.9	U	49.9	mg/Kg		05/03/21 10:04	05/03/21 18:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	116		70 - 130	05/03/21 10:04	05/03/21 18:15	1
o-Terphenyl	130		70 - 130	05/03/21 10:04	05/03/21 18:15	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	63.5		5.00	mg/Kg			05/04/21 03:39	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: SW07

Lab Sample ID: 890-612-10

Date Collected: 04/30/21 13:30

Matrix: Solid

Date Received: 05/03/21 09:37

Sample Depth: 0 - 4.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/04/21 08:30	05/04/21 13:47	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/04/21 08:30	05/04/21 13:47	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/04/21 08:30	05/04/21 13:47	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/04/21 08:30	05/04/21 13:47	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/04/21 08:30	05/04/21 13:47	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/04/21 08:30	05/04/21 13:47	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/04/21 08:30	05/04/21 13:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	05/04/21 08:30	05/04/21 13:47	1
1,4-Difluorobenzene (Surr)	95		70 - 130	05/04/21 08:30	05/04/21 13:47	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/03/21 10:04	05/03/21 18:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/03/21 10:04	05/03/21 18:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/03/21 10:04	05/03/21 18:36	1
Total TPH	<50.0	U	50.0	mg/Kg		05/03/21 10:04	05/03/21 18:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130	05/03/21 10:04	05/03/21 18:36	1
o-Terphenyl	118		70 - 130	05/03/21 10:04	05/03/21 18:36	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.87		4.97	mg/Kg			05/04/21 03:44	1

Client Sample ID: SW08

Lab Sample ID: 890-612-11

Date Collected: 04/30/21 14:00

Matrix: Solid

Date Received: 05/03/21 09:37

Sample Depth: 0 - 4.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/04/21 08:30	05/04/21 14:07	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/04/21 08:30	05/04/21 14:07	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/04/21 08:30	05/04/21 14:07	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		05/04/21 08:30	05/04/21 14:07	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/04/21 08:30	05/04/21 14:07	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		05/04/21 08:30	05/04/21 14:07	1
Total BTEX	<0.00397	U	0.00397	mg/Kg		05/04/21 08:30	05/04/21 14:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	05/04/21 08:30	05/04/21 14:07	1
1,4-Difluorobenzene (Surr)	107		70 - 130	05/04/21 08:30	05/04/21 14:07	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: SW08

Lab Sample ID: 890-612-11

Date Collected: 04/30/21 14:00

Matrix: Solid

Date Received: 05/03/21 09:37

Sample Depth: 0 - 4.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/03/21 10:04	05/03/21 18:58	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/03/21 10:04	05/03/21 18:58	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/03/21 10:04	05/03/21 18:58	1
Total TPH	<49.9	U	49.9	mg/Kg		05/03/21 10:04	05/03/21 18:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130	05/03/21 10:04	05/03/21 18:58	1
o-Terphenyl	110		70 - 130	05/03/21 10:04	05/03/21 18:58	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.50		4.99	mg/Kg			05/04/21 03:50	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU D11Job ID: 890-612-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-612-1	FS05	102	131 S1+
890-612-2	FS06	95	110
890-612-3	FS07	102	121
890-612-4	FS08	102	108
890-612-5	FS09	90	97
890-612-5 MS	FS09	109	103
890-612-5 MSD	FS09	111	103
890-612-6	SW03	92	98
890-612-7	SW04	95	94
890-612-8	SW05	99	94
890-612-9	SW06	91	89
890-612-10	SW07	96	95
890-612-11	SW08	102	107
LCS 880-2609/1-A	Lab Control Sample	93	119
LCS 880-2621/1-A	Lab Control Sample	107	103
LCSD 880-2609/2-A	Lab Control Sample Dup	93	115
LCSD 880-2621/2-A	Lab Control Sample Dup	113	105
MB 880-2609/5-A	Method Blank	113	106
MB 880-2621/5-A	Method Blank	91	94

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-612-1	FS05	132 S1+	124
890-612-2	FS06	120	114
890-612-3	FS07	111	105
890-612-4	FS08	126	119
890-612-5	FS09	120	110
890-612-6	SW03	111	105
890-612-7	SW04	113	108
890-612-8	SW05	121	116
890-612-9	SW06	116	130
890-612-10	SW07	110	118
890-612-11	SW08	101	110
LCS 880-2610/2-A	Lab Control Sample	100	101
LCS 880-2611/2-A	Lab Control Sample	112	98
LCSD 880-2610/3-A	Lab Control Sample Dup	99	103
LCSD 880-2611/3-A	Lab Control Sample Dup	104	92
MB 880-2610/1-A	Method Blank	99	113
MB 880-2611/1-A	Method Blank	115	110

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-612-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2609/5-A
Matrix: Solid
Analysis Batch: 2612

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2609

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/03/21 10:04	05/03/21 13:55	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/03/21 10:04	05/03/21 13:55	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/03/21 10:04	05/03/21 13:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/03/21 10:04	05/03/21 13:55	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/03/21 10:04	05/03/21 13:55	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/03/21 10:04	05/03/21 13:55	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/03/21 10:04	05/03/21 13:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	05/03/21 10:04	05/03/21 13:55	1
1,4-Difluorobenzene (Surr)	106		70 - 130	05/03/21 10:04	05/03/21 13:55	1

Lab Sample ID: LCS 880-2609/1-A
Matrix: Solid
Analysis Batch: 2612

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2609

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.1103		mg/Kg		110	70 - 130
Toluene	0.100	0.1084		mg/Kg		108	70 - 130
Ethylbenzene	0.100	0.1020		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	0.200	0.2070		mg/Kg		104	70 - 130
o-Xylene	0.100	0.09968		mg/Kg		100	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		70 - 130
1,4-Difluorobenzene (Surr)	119		70 - 130

Lab Sample ID: LCSD 880-2609/2-A
Matrix: Solid
Analysis Batch: 2612

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2609

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.1036		mg/Kg		104	70 - 130	6	35
Toluene	0.100	0.1030		mg/Kg		103	70 - 130	5	35
Ethylbenzene	0.100	0.09489		mg/Kg		95	70 - 130	7	35
m-Xylene & p-Xylene	0.200	0.1921		mg/Kg		96	70 - 130	7	35
o-Xylene	0.100	0.09189		mg/Kg		92	70 - 130	8	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		70 - 130
1,4-Difluorobenzene (Surr)	115		70 - 130

Lab Sample ID: MB 880-2621/5-A
Matrix: Solid
Analysis Batch: 2652

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2621

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/04/21 08:30	05/04/21 11:43	1

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU D11

Job ID: 890-612-1
SDG: TE012919259

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

Lab Sample ID: MB 880-2621/5-A
Matrix: Solid
Analysis Batch: 2652

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2621

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Toluene	<0.00200	U	0.00200	mg/Kg		05/04/21 08:30	05/04/21 11:43	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/04/21 08:30	05/04/21 11:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/04/21 08:30	05/04/21 11:43	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/04/21 08:30	05/04/21 11:43	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/04/21 08:30	05/04/21 11:43	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/04/21 08:30	05/04/21 11:43	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	91		70 - 130	05/04/21 08:30	05/04/21 11:43	1
1,4-Difluorobenzene (Surr)	94		70 - 130	05/04/21 08:30	05/04/21 11:43	1

Lab Sample ID: LCS 880-2621/1-A
Matrix: Solid
Analysis Batch: 2652

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2621

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Benzene	0.100	0.1032		mg/Kg		103	70 - 130
Toluene	0.100	0.09821		mg/Kg		98	70 - 130
Ethylbenzene	0.100	0.1006		mg/Kg		101	70 - 130
m-Xylene & p-Xylene	0.200	0.2161		mg/Kg		108	70 - 130
o-Xylene	0.100	0.1084		mg/Kg		108	70 - 130

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

Lab Sample ID: LCSD 880-2621/2-A
Matrix: Solid
Analysis Batch: 2652

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2621

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec. Limits	RPD	Limit
		Result	Qualifier						
Benzene	0.100	0.09859		mg/Kg		99	70 - 130	5	35
Toluene	0.100	0.09350		mg/Kg		94	70 - 130	5	35
Ethylbenzene	0.100	0.09794		mg/Kg		98	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.2114		mg/Kg		106	70 - 130	2	35
o-Xylene	0.100	0.1063		mg/Kg		106	70 - 130	2	35

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 890-612-5 MS
Matrix: Solid
Analysis Batch: 2652

Client Sample ID: FS09
Prep Type: Total/NA
Prep Batch: 2621

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
Benzene	<0.00200	U	0.100	0.09274		mg/Kg		93	70 - 130
Toluene	<0.00200	U	0.100	0.08492		mg/Kg		85	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU D11

Job ID: 890-612-1
SDG: TE012919259

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

Lab Sample ID: 890-612-5 MS
Matrix: Solid
Analysis Batch: 2652

Client Sample ID: FS09
Prep Type: Total/NA
Prep Batch: 2621

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U	0.100	0.08499		mg/Kg		85	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1779		mg/Kg		89	70 - 130
o-Xylene	<0.00200	U	0.100	0.09069		mg/Kg		91	70 - 130

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: 890-612-5 MSD
Matrix: Solid
Analysis Batch: 2652

Client Sample ID: FS09
Prep Type: Total/NA
Prep Batch: 2621

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.101	0.09101		mg/Kg		90	70 - 130	2	35
Toluene	<0.00200	U	0.101	0.08550		mg/Kg		85	70 - 130	1	35
Ethylbenzene	<0.00200	U	0.101	0.08538		mg/Kg		85	70 - 130	0	35
m-Xylene & p-Xylene	<0.00399	U	0.202	0.1804		mg/Kg		89	70 - 130	1	35
o-Xylene	<0.00200	U	0.101	0.09140		mg/Kg		90	70 - 130	1	35

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

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

Lab Sample ID: MB 880-2610/1-A
Matrix: Solid
Analysis Batch: 2603

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2610

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/03/21 10:04	05/03/21 10:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/03/21 10:04	05/03/21 10:30	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/03/21 10:04	05/03/21 10:30	1
Total TPH	<50.0	U	50.0	mg/Kg		05/03/21 10:04	05/03/21 10:30	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130	05/03/21 10:04	05/03/21 10:30	1
o-Terphenyl	113		70 - 130	05/03/21 10:04	05/03/21 10:30	1

Lab Sample ID: LCS 880-2610/2-A
Matrix: Solid
Analysis Batch: 2603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2610

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1072		mg/Kg		107	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-612-1
SDG: TE012919259

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

Lab Sample ID: LCS 880-2610/2-A
Matrix: Solid
Analysis Batch: 2603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2610

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (Over C10-C28)	1000	1030		mg/Kg		103	70 - 130
Surrogate		LCS %Recovery	LCS Qualifier				Limits
1-Chlorooctane		100					70 - 130
o-Terphenyl		101					70 - 130

Lab Sample ID: LCSD 880-2610/3-A
Matrix: Solid
Analysis Batch: 2603

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2610

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1083		mg/Kg		108	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	1057		mg/Kg		106	70 - 130	3	20
Surrogate		LCSD %Recovery	LCSD Qualifier				Limits		
1-Chlorooctane		99					70 - 130		
o-Terphenyl		103					70 - 130		

Lab Sample ID: MB 880-2611/1-A
Matrix: Solid
Analysis Batch: 2605

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2611

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 10:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 10:30	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 10:30	1
Total TPH	<50.0	U	50.0	mg/Kg		05/03/21 10:07	05/03/21 10:30	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130			05/03/21 10:07	05/03/21 10:30	1
o-Terphenyl	110		70 - 130			05/03/21 10:07	05/03/21 10:30	1

Lab Sample ID: LCS 880-2611/2-A
Matrix: Solid
Analysis Batch: 2605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1224		mg/Kg		122	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1033		mg/Kg		103	70 - 130
Surrogate		LCS %Recovery	LCS Qualifier				Limits
1-Chlorooctane		112					70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-612-1
SDG: TE012919259

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

Lab Sample ID: LCS 880-2611/2-A
Matrix: Solid
Analysis Batch: 2605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2611

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o</i> -Terphenyl	98		70 - 130

Lab Sample ID: LCSD 880-2611/3-A
Matrix: Solid
Analysis Batch: 2605

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2611

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1256		mg/Kg		126	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	952.0		mg/Kg		95	70 - 130	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	104		70 - 130
<i>o</i> -Terphenyl	92		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2618/1-A
Matrix: Solid
Analysis Batch: 2646

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/04/21 01:19	1

Lab Sample ID: LCS 880-2618/2-A
Matrix: Solid
Analysis Batch: 2646

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	255.3		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-2618/3-A
Matrix: Solid
Analysis Batch: 2646

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	253.0		mg/Kg		101	90 - 110	1	20

Lab Sample ID: 890-612-4 MS
Matrix: Solid
Analysis Batch: 2646

Client Sample ID: FS08
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.17		253	240.7		mg/Kg		93	90 - 110

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-612-1
SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-612-4 MSD
Matrix: Solid
Analysis Batch: 2646

Client Sample ID: FS08
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6.17		253	247.2		mg/Kg		95	90 - 110	3	20

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

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU D11Job ID: 890-612-1
SDG: TE012919259

GC VOA

Prep Batch: 2609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-612-1	FS05	Total/NA	Solid	5035	
890-612-2	FS06	Total/NA	Solid	5035	
890-612-3	FS07	Total/NA	Solid	5035	
890-612-4	FS08	Total/NA	Solid	5035	
MB 880-2609/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2609/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2609/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 2612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-612-1	FS05	Total/NA	Solid	8021B	2609
890-612-2	FS06	Total/NA	Solid	8021B	2609
890-612-3	FS07	Total/NA	Solid	8021B	2609
890-612-4	FS08	Total/NA	Solid	8021B	2609
MB 880-2609/5-A	Method Blank	Total/NA	Solid	8021B	2609
LCS 880-2609/1-A	Lab Control Sample	Total/NA	Solid	8021B	2609
LCSD 880-2609/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2609

Prep Batch: 2621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-612-5	FS09	Total/NA	Solid	5035	
890-612-6	SW03	Total/NA	Solid	5035	
890-612-7	SW04	Total/NA	Solid	5035	
890-612-8	SW05	Total/NA	Solid	5035	
890-612-9	SW06	Total/NA	Solid	5035	
890-612-10	SW07	Total/NA	Solid	5035	
890-612-11	SW08	Total/NA	Solid	5035	
MB 880-2621/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2621/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2621/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-612-5 MS	FS09	Total/NA	Solid	5035	
890-612-5 MSD	FS09	Total/NA	Solid	5035	

Analysis Batch: 2652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-612-5	FS09	Total/NA	Solid	8021B	2621
890-612-6	SW03	Total/NA	Solid	8021B	2621
890-612-7	SW04	Total/NA	Solid	8021B	2621
890-612-8	SW05	Total/NA	Solid	8021B	2621
890-612-9	SW06	Total/NA	Solid	8021B	2621
890-612-10	SW07	Total/NA	Solid	8021B	2621
890-612-11	SW08	Total/NA	Solid	8021B	2621
MB 880-2621/5-A	Method Blank	Total/NA	Solid	8021B	2621
LCS 880-2621/1-A	Lab Control Sample	Total/NA	Solid	8021B	2621
LCSD 880-2621/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2621
890-612-5 MS	FS09	Total/NA	Solid	8021B	2621
890-612-5 MSD	FS09	Total/NA	Solid	8021B	2621

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-612-1
SDG: TE012919259

GC Semi VOA

Analysis Batch: 2603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-612-9	SW06	Total/NA	Solid	8015B NM	2610
890-612-10	SW07	Total/NA	Solid	8015B NM	2610
890-612-11	SW08	Total/NA	Solid	8015B NM	2610
MB 880-2610/1-A	Method Blank	Total/NA	Solid	8015B NM	2610
LCS 880-2610/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2610
LCSD 880-2610/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2610

Analysis Batch: 2605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-612-1	FS05	Total/NA	Solid	8015B NM	2611
890-612-2	FS06	Total/NA	Solid	8015B NM	2611
890-612-3	FS07	Total/NA	Solid	8015B NM	2611
890-612-4	FS08	Total/NA	Solid	8015B NM	2611
890-612-5	FS09	Total/NA	Solid	8015B NM	2611
890-612-6	SW03	Total/NA	Solid	8015B NM	2611
890-612-7	SW04	Total/NA	Solid	8015B NM	2611
890-612-8	SW05	Total/NA	Solid	8015B NM	2611
MB 880-2611/1-A	Method Blank	Total/NA	Solid	8015B NM	2611
LCS 880-2611/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2611
LCSD 880-2611/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2611

Prep Batch: 2610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-612-9	SW06	Total/NA	Solid	8015NM Prep	
890-612-10	SW07	Total/NA	Solid	8015NM Prep	
890-612-11	SW08	Total/NA	Solid	8015NM Prep	
MB 880-2610/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2610/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2610/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Prep Batch: 2611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-612-1	FS05	Total/NA	Solid	8015NM Prep	
890-612-2	FS06	Total/NA	Solid	8015NM Prep	
890-612-3	FS07	Total/NA	Solid	8015NM Prep	
890-612-4	FS08	Total/NA	Solid	8015NM Prep	
890-612-5	FS09	Total/NA	Solid	8015NM Prep	
890-612-6	SW03	Total/NA	Solid	8015NM Prep	
890-612-7	SW04	Total/NA	Solid	8015NM Prep	
890-612-8	SW05	Total/NA	Solid	8015NM Prep	
MB 880-2611/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2611/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2611/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 2618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-612-1	FS05	Soluble	Solid	DI Leach	
890-612-2	FS06	Soluble	Solid	DI Leach	
890-612-3	FS07	Soluble	Solid	DI Leach	

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-612-1
SDG: TE012919259

HPLC/IC (Continued)

Leach Batch: 2618 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-612-4	FS08	Soluble	Solid	DI Leach	
890-612-5	FS09	Soluble	Solid	DI Leach	
890-612-6	SW03	Soluble	Solid	DI Leach	
890-612-7	SW04	Soluble	Solid	DI Leach	
890-612-8	SW05	Soluble	Solid	DI Leach	
890-612-9	SW06	Soluble	Solid	DI Leach	
890-612-10	SW07	Soluble	Solid	DI Leach	
890-612-11	SW08	Soluble	Solid	DI Leach	
MB 880-2618/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2618/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2618/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-612-4 MS	FS08	Soluble	Solid	DI Leach	
890-612-4 MSD	FS08	Soluble	Solid	DI Leach	

Analysis Batch: 2646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-612-1	FS05	Soluble	Solid	300.0	2618
890-612-2	FS06	Soluble	Solid	300.0	2618
890-612-3	FS07	Soluble	Solid	300.0	2618
890-612-4	FS08	Soluble	Solid	300.0	2618
890-612-5	FS09	Soluble	Solid	300.0	2618
890-612-6	SW03	Soluble	Solid	300.0	2618
890-612-7	SW04	Soluble	Solid	300.0	2618
890-612-8	SW05	Soluble	Solid	300.0	2618
890-612-9	SW06	Soluble	Solid	300.0	2618
890-612-10	SW07	Soluble	Solid	300.0	2618
890-612-11	SW08	Soluble	Solid	300.0	2618
MB 880-2618/1-A	Method Blank	Soluble	Solid	300.0	2618
LCS 880-2618/2-A	Lab Control Sample	Soluble	Solid	300.0	2618
LCSD 880-2618/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2618
890-612-4 MS	FS08	Soluble	Solid	300.0	2618
890-612-4 MSD	FS08	Soluble	Solid	300.0	2618

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU D11Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: FS05

Lab Sample ID: 890-612-1

Date Collected: 04/30/21 09:30

Matrix: Solid

Date Received: 05/03/21 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2609	05/03/21 10:04	KL	XM
Total/NA	Analysis	8021B		1	2612	05/04/21 09:35	KL	XM
Total/NA	Prep	8015NM Prep			2611	05/03/21 10:07	DM	XM
Total/NA	Analysis	8015B NM		1	2605	05/03/21 16:51	AJ	XM
Soluble	Leach	DI Leach			2618	05/03/21 12:04	CH	XM
Soluble	Analysis	300.0		1	2646	05/04/21 02:35	CH	XM

Client Sample ID: FS06

Lab Sample ID: 890-612-2

Date Collected: 04/30/21 09:45

Matrix: Solid

Date Received: 05/03/21 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2609	05/03/21 10:04	KL	XM
Total/NA	Analysis	8021B		1	2612	05/04/21 09:56	KL	XM
Total/NA	Prep	8015NM Prep			2611	05/03/21 10:07	DM	XM
Total/NA	Analysis	8015B NM		1	2605	05/03/21 17:12	AJ	XM
Soluble	Leach	DI Leach			2618	05/03/21 12:04	CH	XM
Soluble	Analysis	300.0		1	2646	05/04/21 02:40	CH	XM

Client Sample ID: FS07

Lab Sample ID: 890-612-3

Date Collected: 04/30/21 10:00

Matrix: Solid

Date Received: 05/03/21 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2609	05/03/21 10:04	KL	XM
Total/NA	Analysis	8021B		1	2612	05/04/21 10:16	KL	XM
Total/NA	Prep	8015NM Prep			2611	05/03/21 10:07	DM	XM
Total/NA	Analysis	8015B NM		1	2605	05/03/21 17:33	AJ	XM
Soluble	Leach	DI Leach			2618	05/03/21 12:04	CH	XM
Soluble	Analysis	300.0		1	2646	05/04/21 02:45	CH	XM

Client Sample ID: FS08

Lab Sample ID: 890-612-4

Date Collected: 04/30/21 10:20

Matrix: Solid

Date Received: 05/03/21 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2609	05/03/21 10:04	KL	XM
Total/NA	Analysis	8021B		1	2612	05/04/21 10:37	KL	XM
Total/NA	Prep	8015NM Prep			2611	05/03/21 10:07	DM	XM
Total/NA	Analysis	8015B NM		1	2605	05/03/21 17:54	AJ	XM
Soluble	Leach	DI Leach			2618	05/03/21 12:04	CH	XM
Soluble	Analysis	300.0		1	2646	05/04/21 02:51	CH	XM

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Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: FS09

Lab Sample ID: 890-612-5

Date Collected: 04/30/21 10:30

Matrix: Solid

Date Received: 05/03/21 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2621	05/04/21 08:30	KL	XM
Total/NA	Analysis	8021B		1	2652	05/04/21 12:05	KL	XM
Total/NA	Prep	8015NM Prep			2611	05/03/21 10:07	DM	XM
Total/NA	Analysis	8015B NM		1	2605	05/03/21 18:15	AJ	XM
Soluble	Leach	DI Leach			2618	05/03/21 12:04	CH	XM
Soluble	Analysis	300.0		1	2646	05/04/21 03:07	CH	XM

Client Sample ID: SW03

Lab Sample ID: 890-612-6

Date Collected: 04/30/21 11:00

Matrix: Solid

Date Received: 05/03/21 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2621	05/04/21 08:30	KL	XM
Total/NA	Analysis	8021B		1	2652	05/04/21 12:25	KL	XM
Total/NA	Prep	8015NM Prep			2611	05/03/21 10:07	DM	XM
Total/NA	Analysis	8015B NM		1	2605	05/03/21 18:36	AJ	XM
Soluble	Leach	DI Leach			2618	05/03/21 12:04	CH	XM
Soluble	Analysis	300.0		1	2646	05/04/21 03:12	CH	XM

Client Sample ID: SW04

Lab Sample ID: 890-612-7

Date Collected: 04/30/21 11:30

Matrix: Solid

Date Received: 05/03/21 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2621	05/04/21 08:30	KL	XM
Total/NA	Analysis	8021B		1	2652	05/04/21 12:45	KL	XM
Total/NA	Prep	8015NM Prep			2611	05/03/21 10:07	DM	XM
Total/NA	Analysis	8015B NM		1	2605	05/03/21 18:58	AJ	XM
Soluble	Leach	DI Leach			2618	05/03/21 12:04	CH	XM
Soluble	Analysis	300.0		1	2646	05/04/21 03:28	CH	XM

Client Sample ID: SW05

Lab Sample ID: 890-612-8

Date Collected: 04/30/21 12:00

Matrix: Solid

Date Received: 05/03/21 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2621	05/04/21 08:30	KL	XM
Total/NA	Analysis	8021B		1	2652	05/04/21 13:06	KL	XM
Total/NA	Prep	8015NM Prep			2611	05/03/21 10:07	DM	XM
Total/NA	Analysis	8015B NM		1	2605	05/03/21 19:19	AJ	XM
Soluble	Leach	DI Leach			2618	05/03/21 12:04	CH	XM
Soluble	Analysis	300.0		1	2646	05/04/21 03:34	CH	XM

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: SW06

Lab Sample ID: 890-612-9

Date Collected: 04/30/21 13:00

Matrix: Solid

Date Received: 05/03/21 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2621	05/04/21 08:30	KL	XM
Total/NA	Analysis	8021B		1	2652	05/04/21 13:26	KL	XM
Total/NA	Prep	8015NM Prep			2610	05/03/21 10:04	DM	XM
Total/NA	Analysis	8015B NM		1	2603	05/03/21 18:15	AJ	XM
Soluble	Leach	DI Leach			2618	05/03/21 12:04	CH	XM
Soluble	Analysis	300.0		1	2646	05/04/21 03:39	CH	XM

Client Sample ID: SW07

Lab Sample ID: 890-612-10

Date Collected: 04/30/21 13:30

Matrix: Solid

Date Received: 05/03/21 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2621	05/04/21 08:30	KL	XM
Total/NA	Analysis	8021B		1	2652	05/04/21 13:47	KL	XM
Total/NA	Prep	8015NM Prep			2610	05/03/21 10:04	DM	XM
Total/NA	Analysis	8015B NM		1	2603	05/03/21 18:36	AJ	XM
Soluble	Leach	DI Leach			2618	05/03/21 12:04	CH	XM
Soluble	Analysis	300.0		1	2646	05/04/21 03:44	CH	XM

Client Sample ID: SW08

Lab Sample ID: 890-612-11

Date Collected: 04/30/21 14:00

Matrix: Solid

Date Received: 05/03/21 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2621	05/04/21 08:30	KL	XM
Total/NA	Analysis	8021B		1	2652	05/04/21 14:07	KL	XM
Total/NA	Prep	8015NM Prep			2610	05/03/21 10:04	DM	XM
Total/NA	Analysis	8015B NM		1	2603	05/03/21 18:58	AJ	XM
Soluble	Leach	DI Leach			2618	05/03/21 12:04	CH	XM
Soluble	Analysis	300.0		1	2646	05/04/21 03:50	CH	XM

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-612-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-612-1
SDG: TE012919259

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-612-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-612-1	FS05	Solid	04/30/21 09:30	05/03/21 09:37	- 2
890-612-2	FS06	Solid	04/30/21 09:45	05/03/21 09:37	- 2
890-612-3	FS07	Solid	04/30/21 10:00	05/03/21 09:37	- 2
890-612-4	FS08	Solid	04/30/21 10:20	05/03/21 09:37	- 4.5
890-612-5	FS09	Solid	04/30/21 10:30	05/03/21 09:37	- 4.5
890-612-6	SW03	Solid	04/30/21 11:00	05/03/21 09:37	0 - 2
890-612-7	SW04	Solid	04/30/21 11:30	05/03/21 09:37	0 - 2
890-612-8	SW05	Solid	04/30/21 12:00	05/03/21 09:37	0 - 2
890-612-9	SW06	Solid	04/30/21 13:00	05/03/21 09:37	0 - 2
890-612-10	SW07	Solid	04/30/21 13:30	05/03/21 09:37	0 - 4.5
890-612-11	SW08	Solid	04/30/21 14:00	05/03/21 09:37	0 - 4.5

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

Chain of Custody

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager: Dan Moir
 Company Name: LT Environmental, Inc., Permian office
 Address: 3300 North A Street
 City, State ZIP: Midland, TX 79705
 Phone: 432.236.3849
 Email: dbell@ltenv.com
 Bill to: (if different)
 Company Name: XTO Energy
 Address: 3104 E Green Street
 City, State ZIP: Carlsbad, NM 88220

Program: UST/PST PRP Brownfields RC Upertund
 State of Project: _____
 Reporting Level: Level II Level III ST/UST RRP Level IV
 Deliverables: EDD ADAPT Other: _____

Project Name: DRU OT 1 Turn Around _____
 Project Number: TE012419259 Routine
 P.O. Number: MM200747253 Rush: 24HR
 Sampler's Name: Benjamin Bellill Due Date: _____

SAMPLE RECEIPT Temp Blank: Yes No Wet Ice: Yes No
 Temperature (°C): 18 Thermometer ID: _____
 Received Inact: Yes No T-NM-007
 Cooler Custody Seals: Yes No Correction Factor: 1.0
 Sample Custody Seals: Yes No Total Containers: _____

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers			Sample Comments
					TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	
F505	S	4/8/21	0930	2'	1	1	1	
F506			0945	2'	1	1	1	
F507			1000	2'	1	1	1	
F508			1020	4.5'	1	1	1	
F509			1030	4.5'	1	1	1	
SW03			1100	0-2'	1	1	1	
SW04			1130	0-2'	1	1	1	
SW05			1200	0-2'	1	1	1	
SW06			1300	0-2'	1	1	1	
SW07			1330	0-4.5'	1	1	1	



890-612 Chain of Custody

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	5/3/21 @ 09:00			
<i>[Signature]</i>	<i>[Signature]</i>	5.3.21 / 9.37			



Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432-704-5440) EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
Hobbs, NM (575-392-7550) Phoenix, AZ (480-365-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

Chain of Custody

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager: Dan Moir
 Company Name: LT Environmental, Inc., Permian office
 Address: 3300 North A Street
 City, State ZIP: Midland, TX 79705
 Phone: 432.236.3849
 Bill to: (if different) Kyle Littrell
 Company Name: XTO Energy
 Address: 3104 E Green Street
 City, State ZIP: Carlsbad, NM 88220
 Email: bbell@lteny.com

Program: UST/PST PRP Brownfields RC Superfund
 State of Project: Level II Level III ST/UST RRP Level IV
 Reporting Level: EDD ADAPT Other: _____
 Deliverables: EDD ADAPT Other: _____

Project Name: TRV DI 1 Turn Around: _____
 Project Number: TE012414254 Routine:
 P.O. Number: ARM200274253 Rush: 24HR
 Sampler's Name: Benjamin Bellill Due Date: _____

SAMPLE RECEIPT
 Temperature (°C): 18 Thermometer ID: _____
 Received Inlet: Yes No Correction Factor: T-NM-007
 Cooler Custody Seals: Yes No Total Containers: 1.0
 Sample Custody Seals: Yes No

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST										Sample Comments
5W08	S	4/30/21	1400	0-4.5'	1	X	X	X	<p style="text-align: center;">_____</p> <p style="text-align: center;">SJS 4/30/21</p>										TAT starts the day received by the lab, if received by 4:30pm

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SIO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	5/3/21 @ 9:00	<i>[Signature]</i>	<i>[Signature]</i>	
<i>[Signature]</i>	<i>[Signature]</i>	5-3-21 / 9:37			

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-612-1
SDG Number: TE012919259

Login Number: 612
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-612-1
SDG Number: TE012919259

Login Number: 612
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 05/03/21 03:48 PM

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

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-626-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI 1

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

Attn: Dan Moir

Authorized for release by:
5/5/2021 5:39:31 PM

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



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

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

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Client: WSP USA Inc.
Project/Site: JRU DI 1

Laboratory Job ID: 890-626-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-626-1
SDG: TE012919259

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-626-1
SDG: TE012919259

Job ID: 890-626-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-626-1

Receipt

The sample was received on 5/4/2021 4:31 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

Receipt Exceptions

The following samples analyzed for method <FRACTION_METHOD> were received and analyzed from an unpreserved bulk soil jar:
LDP05B-SW (890-626-1).
BTEX 8021

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.

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Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-626-1
SDG: TE012919259

Client Sample ID: LDP05B-SW

Lab Sample ID: 890-626-1

Date Collected: 05/04/21 14:30

Matrix: Solid

Date Received: 05/04/21 16:31

Sample Depth: - 13

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/05/21 08:54	05/05/21 14:11	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/05/21 08:54	05/05/21 14:11	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/05/21 08:54	05/05/21 14:11	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/05/21 08:54	05/05/21 14:11	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/05/21 08:54	05/05/21 14:11	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/05/21 08:54	05/05/21 14:11	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/05/21 08:54	05/05/21 14:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	05/05/21 08:54	05/05/21 14:11	1
1,4-Difluorobenzene (Surr)	96		70 - 130	05/05/21 08:54	05/05/21 14:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/05/21 11:47	05/05/21 15:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/05/21 11:47	05/05/21 15:21	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/05/21 11:47	05/05/21 15:21	1
Total TPH	<50.0	U	50.0	mg/Kg		05/05/21 11:47	05/05/21 15:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130	05/05/21 11:47	05/05/21 15:21	1
o-Terphenyl	112		70 - 130	05/05/21 11:47	05/05/21 15:21	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	144		5.00	mg/Kg			05/05/21 15:40	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-626-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)**Matrix: Solid****Prep Type: Total/NA**

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-626-1	LDP05B-SW	99	96
LCS 880-2703/1-A	Lab Control Sample	113	107
LCSD 880-2703/2-A	Lab Control Sample Dup	111	102
MB 880-2703/5-A	Method Blank	92	94

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)**Matrix: Solid****Prep Type: Total/NA**

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
890-626-1	LDP05B-SW	108	112
LCS 880-2725/2-A	Lab Control Sample	105	101
LCSD 880-2725/3-A	Lab Control Sample Dup	105	102
MB 880-2725/1-A	Method Blank	105	108

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-626-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2703/5-A
Matrix: Solid
Analysis Batch: 2704

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2703

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/05/21 08:54	05/05/21 12:07	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/05/21 08:54	05/05/21 12:07	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/05/21 08:54	05/05/21 12:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/05/21 08:54	05/05/21 12:07	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/05/21 08:54	05/05/21 12:07	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/05/21 08:54	05/05/21 12:07	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/05/21 08:54	05/05/21 12:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	05/05/21 08:54	05/05/21 12:07	1
1,4-Difluorobenzene (Surr)	94		70 - 130	05/05/21 08:54	05/05/21 12:07	1

Lab Sample ID: LCS 880-2703/1-A
Matrix: Solid
Analysis Batch: 2704

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2703

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.08949		mg/Kg		89	70 - 130
Toluene	0.100	0.08579		mg/Kg		86	70 - 130
Ethylbenzene	0.100	0.09189		mg/Kg		92	70 - 130
m-Xylene & p-Xylene	0.200	0.1953		mg/Kg		98	70 - 130
o-Xylene	0.100	0.1028		mg/Kg		103	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: LCSD 880-2703/2-A
Matrix: Solid
Analysis Batch: 2704

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2703

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.08619		mg/Kg		86	70 - 130	4	35
Toluene	0.100	0.08277		mg/Kg		83	70 - 130	4	35
Ethylbenzene	0.100	0.08820		mg/Kg		88	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.1877		mg/Kg		94	70 - 130	4	35
o-Xylene	0.100	0.09784		mg/Kg		98	70 - 130	5	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-626-1
SDG: TE012919259

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

Lab Sample ID: MB 880-2725/1-A
Matrix: Solid
Analysis Batch: 2715

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2725

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/05/21 11:47	05/05/21 12:08	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/05/21 11:47	05/05/21 12:08	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/05/21 11:47	05/05/21 12:08	1
Total TPH	<50.0	U	50.0	mg/Kg		05/05/21 11:47	05/05/21 12:08	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130	05/05/21 11:47	05/05/21 12:08	1
o-Terphenyl	108		70 - 130	05/05/21 11:47	05/05/21 12:08	1

Lab Sample ID: LCS 880-2725/2-A
Matrix: Solid
Analysis Batch: 2715

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2725

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	939.0		mg/Kg		94	70 - 130
Diesel Range Organics (Over C10-C28)	1000	781.3		mg/Kg		78	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: LCSD 880-2725/3-A
Matrix: Solid
Analysis Batch: 2715

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2725

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	901.6		mg/Kg		90	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	1000	788.3		mg/Kg		79	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	102		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2731/1-A
Matrix: Solid
Analysis Batch: 2732

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/05/21 16:19	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-626-1
SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-2731/2-A
Matrix: Solid
Analysis Batch: 2732

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	242.0		mg/Kg		97	90 - 110

Lab Sample ID: LCSD 880-2731/3-A
Matrix: Solid
Analysis Batch: 2732

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	242.1		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 890-626-1 MS
Matrix: Solid
Analysis Batch: 2732

Client Sample ID: LDP05B-SW
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	144		250	378.0		mg/Kg		94	90 - 110

Lab Sample ID: 890-626-1 MSD
Matrix: Solid
Analysis Batch: 2732

Client Sample ID: LDP05B-SW
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	144		250	378.3		mg/Kg		94	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-626-1
SDG: TE012919259

GC VOA

Prep Batch: 2703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-626-1	LDP05B-SW	Total/NA	Solid	5035	
MB 880-2703/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2703/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2703/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 2704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-626-1	LDP05B-SW	Total/NA	Solid	8021B	2703
MB 880-2703/5-A	Method Blank	Total/NA	Solid	8021B	2703
LCS 880-2703/1-A	Lab Control Sample	Total/NA	Solid	8021B	2703
LCSD 880-2703/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2703

GC Semi VOA

Analysis Batch: 2715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-626-1	LDP05B-SW	Total/NA	Solid	8015B NM	2725
MB 880-2725/1-A	Method Blank	Total/NA	Solid	8015B NM	2725
LCS 880-2725/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2725
LCSD 880-2725/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2725

Prep Batch: 2725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-626-1	LDP05B-SW	Total/NA	Solid	8015NM Prep	
MB 880-2725/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2725/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2725/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 2731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-626-1	LDP05B-SW	Soluble	Solid	DI Leach	
MB 880-2731/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2731/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2731/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-626-1 MS	LDP05B-SW	Soluble	Solid	DI Leach	
890-626-1 MSD	LDP05B-SW	Soluble	Solid	DI Leach	

Analysis Batch: 2732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-626-1	LDP05B-SW	Soluble	Solid	300.0	2731
MB 880-2731/1-A	Method Blank	Soluble	Solid	300.0	2731
LCS 880-2731/2-A	Lab Control Sample	Soluble	Solid	300.0	2731
LCSD 880-2731/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2731
890-626-1 MS	LDP05B-SW	Soluble	Solid	300.0	2731
890-626-1 MSD	LDP05B-SW	Soluble	Solid	300.0	2731

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-626-1
SDG: TE012919259

Client Sample ID: LDP05B-SW

Lab Sample ID: 890-626-1

Date Collected: 05/04/21 14:30

Matrix: Solid

Date Received: 05/04/21 16:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2703	05/05/21 08:54	KL	XM
Total/NA	Analysis	8021B		1	2704	05/05/21 14:11	KL	XM
Total/NA	Prep	8015NM Prep			2725	05/05/21 11:47	DM	XM
Total/NA	Analysis	8015B NM		1	2715	05/05/21 15:21	AJ	XM
Soluble	Leach	DI Leach			2731	05/05/21 13:57	SC	XM
Soluble	Analysis	300.0		1	2732	05/05/21 15:40	CH	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: JRU DI 1

Job ID: 890-626-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-626-1
SDG: TE012919259

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-626-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-626-1	LDP05B-SW	Solid	05/04/21 14:30	05/04/21 16:31	- 13

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Environment Testing
Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTELL
Company Name:	WSP USA	Company Name:	XTD ENERGY
Address:	3300 North A Street	Address:	3104 E GREENE ST
City, State ZIP:	MIDLAND, TX 79705	City, State ZIP:	CARLSBAD, NM 88220
Phone:	(801) 702-3324	Email:	anna.byers@xenco.com

Program:	UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting:	Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables:	EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: _____

Project Name:	TRU DI 1	Turn Around	Pras. Code	ANALYSIS REQUEST	Preservative Codes
Project Number:	TEP12919259	<input type="checkbox"/> Routine <input checked="" type="checkbox"/> Rush			None: NO DI Water: H ₂ O
Project Location:	Eddy County	Due Date:	SAME DAY		Cool: Cool MeOH: Me
Sampler's Name:	Anna Byers	TAT starts the day received by the lab, if received by 4:30pm			HCL: HC HNO ₃ : HN
PO #:		Temp Blank:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		H ₂ SO ₄ : H ₂ NaOH: Na
SAMPLE RECEIPT	Samples Received In tact:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Thermometer ID:	TEP14707	H ₃ PO ₄ : HP
	Cooler Custody Seals:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Correction Factor:	-0.2	NaHSO ₄ : NABIS
	Sample Custody Seals:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Temperature Reading:	1.2	Na ₂ S ₂ O ₅ : NASSO ₅
	Total Containers:		Corrected Temperature:	1.2	Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SACP



Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters	Sample Comments
LDP053-SW	S	5/4/21	1430	13'	Comp	1	X TPH (EPA 8015 Mod) X BTEX (EPA 8021 B) X Chloride (EPA 300.2)	AFC: EW120210550.FE8101 COST CENTRE: 1082151401
<i>[Handwritten Signature]</i>								

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 A1 Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn

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

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins 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 Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	5/4/21 16:31			

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-626-1
SDG Number: TE012919259

Login Number: 626

List Number: 1

Creator: Ordonez, Gabby

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-626-1
SDG Number: TE012919259

Login Number: 626
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 05/05/21 01:40 PM

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

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-634-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI 1

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

Attn: Dan Moir

Authorized for release by:
5/10/2021 9:10:00 AM

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



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

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

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Client: WSP USA Inc.
Project/Site: JRU DI 1

Laboratory Job ID: 890-634-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-634-1
SDG: TE012919259

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-634-1
SDG: TE012919259

Job ID: 890-634-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-634-1

Comments

No additional comments.

Receipt

The samples were received on 5/6/2021 10:35 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 was 0.4° C.

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: FS10 (890-634-1) and FS11 (890-634-2).

GC VOA

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

GC Semi VOA

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

General Chemistry

Method 300.0: The matrix spike (MS) recoveries for analytical batch 880-2819 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. The associated samples are: FS10 (890-634-1) and FS11 (890-634-2).

The matrix spike duplicate (MSD) recoveries for analytical batch 880-2819 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. The associated samples are: FS10 (890-634-1) and FS11 (890-634-2).

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

Organic Prep

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

VOA Prep

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



Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-634-1
SDG: TE012919259

Client Sample ID: FS10

Lab Sample ID: 890-634-1

Date Collected: 05/05/21 11:10

Matrix: Solid

Date Received: 05/06/21 10:35

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/06/21 15:00	05/06/21 23:08	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/06/21 15:00	05/06/21 23:08	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/06/21 15:00	05/06/21 23:08	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		05/06/21 15:00	05/06/21 23:08	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/06/21 15:00	05/06/21 23:08	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		05/06/21 15:00	05/06/21 23:08	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		05/06/21 15:00	05/06/21 23:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	05/06/21 15:00	05/06/21 23:08	1
1,4-Difluorobenzene (Surr)	97		70 - 130	05/06/21 15:00	05/06/21 23:08	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 05:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 05:56	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 05:56	1
Total TPH	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 05:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	117		70 - 130	05/06/21 16:20	05/07/21 05:56	1
o-Terphenyl	116		70 - 130	05/06/21 16:20	05/07/21 05:56	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	106	F1	4.99	mg/Kg			05/07/21 16:52	1

Client Sample ID: FS11

Lab Sample ID: 890-634-2

Date Collected: 05/05/21 12:05

Matrix: Solid

Date Received: 05/06/21 10:35

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/06/21 23:28	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/06/21 23:28	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/06/21 23:28	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/06/21 23:28	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/06/21 23:28	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/06/21 23:28	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/06/21 23:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	05/06/21 15:00	05/06/21 23:28	1
1,4-Difluorobenzene (Surr)	97		70 - 130	05/06/21 15:00	05/06/21 23:28	1

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Client Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI 1

Job ID: 890-634-1
 SDG: TE012919259

Client Sample ID: FS11

Lab Sample ID: 890-634-2

Date Collected: 05/05/21 12:05

Matrix: Solid

Date Received: 05/06/21 10:35

Sample Depth: - 1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 06:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 06:17	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 06:17	1
Total TPH	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 06:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130	05/06/21 16:20	05/07/21 06:17	1
o-Terphenyl	106		70 - 130	05/06/21 16:20	05/07/21 06:17	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	101		5.04	mg/Kg			05/07/21 17:08	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-634-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-634-1	FS10	97	97
890-634-1 MS	FS10	113	105
890-634-1 MSD	FS10	115	105
890-634-2	FS11	92	97
LCS 880-2765/1-A	Lab Control Sample	110	106
LCSD 880-2765/2-A	Lab Control Sample Dup	111	105
MB 880-2756/5-A	Method Blank	91	93
MB 880-2765/5-A	Method Blank	88	91

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
890-634-1	FS10	117	116
890-634-2	FS11	105	106
LCS 880-2790/2-A	Lab Control Sample	103	98
LCSD 880-2790/3-A	Lab Control Sample Dup	103	100
MB 880-2790/1-A	Method Blank	95	101

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-634-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2756/5-A
Matrix: Solid
Analysis Batch: 2758

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2756

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/06/21 08:25	05/06/21 11:55	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/06/21 08:25	05/06/21 11:55	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/06/21 08:25	05/06/21 11:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/06/21 08:25	05/06/21 11:55	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/06/21 08:25	05/06/21 11:55	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/06/21 08:25	05/06/21 11:55	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/06/21 08:25	05/06/21 11:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130	05/06/21 08:25	05/06/21 11:55	1
1,4-Difluorobenzene (Surr)	93		70 - 130	05/06/21 08:25	05/06/21 11:55	1

Lab Sample ID: MB 880-2765/5-A
Matrix: Solid
Analysis Batch: 2758

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2765

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/06/21 22:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/06/21 22:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/06/21 22:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/06/21 15:00	05/06/21 22:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/06/21 22:46	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/06/21 15:00	05/06/21 22:46	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/06/21 15:00	05/06/21 22:46	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130	05/06/21 15:00	05/06/21 22:46	1
1,4-Difluorobenzene (Surr)	91		70 - 130	05/06/21 15:00	05/06/21 22:46	1

Lab Sample ID: LCS 880-2765/1-A
Matrix: Solid
Analysis Batch: 2758

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2765

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.1077		mg/Kg		108	70 - 130
Toluene	0.100	0.1041		mg/Kg		104	70 - 130
Ethylbenzene	0.100	0.1078		mg/Kg		108	70 - 130
m-Xylene & p-Xylene	0.200	0.2307		mg/Kg		115	70 - 130
o-Xylene	0.100	0.1172		mg/Kg		117	70 - 130

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

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-634-1
SDG: TE012919259

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

Lab Sample ID: LCSD 880-2765/2-A

Matrix: Solid

Analysis Batch: 2758

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 2765

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
Benzene	0.100	0.1110		mg/Kg		111	70 - 130	3	35	
Toluene	0.100	0.1070		mg/Kg		107	70 - 130	3	35	
Ethylbenzene	0.100	0.1089		mg/Kg		109	70 - 130	1	35	
m-Xylene & p-Xylene	0.200	0.2334		mg/Kg		117	70 - 130	1	35	
o-Xylene	0.100	0.1185		mg/Kg		118	70 - 130	1	35	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 890-634-1 MS

Matrix: Solid

Analysis Batch: 2758

Client Sample ID: FS10

Prep Type: Total/NA

Prep Batch: 2765

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
									Limits	RPD		
Benzene	<0.00198	U	0.0996	0.07528		mg/Kg		76	70 - 130			
Toluene	<0.00198	U	0.0996	0.07689		mg/Kg		76	70 - 130			
Ethylbenzene	<0.00198	U	0.0996	0.08048		mg/Kg		81	70 - 130			
m-Xylene & p-Xylene	<0.00396	U	0.199	0.1709		mg/Kg		86	70 - 130			
o-Xylene	<0.00198	U	0.0996	0.08694		mg/Kg		87	70 - 130			

Surrogate	MS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 890-634-1 MSD

Matrix: Solid

Analysis Batch: 2758

Client Sample ID: FS10

Prep Type: Total/NA

Prep Batch: 2765

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
									Limits	RPD		
Benzene	<0.00198	U	0.0998	0.07441		mg/Kg		75	70 - 130	1	35	
Toluene	<0.00198	U	0.0998	0.07510		mg/Kg		74	70 - 130	2	35	
Ethylbenzene	<0.00198	U	0.0998	0.07950		mg/Kg		80	70 - 130	1	35	
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1694		mg/Kg		85	70 - 130	1	35	
o-Xylene	<0.00198	U	0.0998	0.08665		mg/Kg		87	70 - 130	0	35	

Surrogate	MSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-634-1
SDG: TE012919259

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

Lab Sample ID: MB 880-2790/1-A
Matrix: Solid
Analysis Batch: 2804

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2790

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/06/21 21:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/06/21 21:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/06/21 21:36	1
Total TPH	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/06/21 21:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130	05/06/21 16:20	05/06/21 21:36	1
o-Terphenyl	101		70 - 130	05/06/21 16:20	05/06/21 21:36	1

Lab Sample ID: LCS 880-2790/2-A
Matrix: Solid
Analysis Batch: 2804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2790

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	867.9		mg/Kg		87	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1022		mg/Kg		102	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: LCSD 880-2790/3-A
Matrix: Solid
Analysis Batch: 2804

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2790

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	871.3		mg/Kg		87	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	1000	1023		mg/Kg		102	70 - 130	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	100		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2809/1-A
Matrix: Solid
Analysis Batch: 2819

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/07/21 13:38	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-634-1
SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-2809/2-A
Matrix: Solid
Analysis Batch: 2819

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	233.7		mg/Kg		93	90 - 110

Lab Sample ID: LCSD 880-2809/3-A
Matrix: Solid
Analysis Batch: 2819

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	232.2		mg/Kg		93	90 - 110	1	20

Lab Sample ID: 890-634-1 MS
Matrix: Solid
Analysis Batch: 2819

Client Sample ID: FS10
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	106	F1	250	321.8	F1	mg/Kg		87	90 - 110

Lab Sample ID: 890-634-1 MSD
Matrix: Solid
Analysis Batch: 2819

Client Sample ID: FS10
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	106	F1	250	330.7		mg/Kg		90	90 - 110	3	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-634-1
SDG: TE012919259

GC VOA

Prep Batch: 2756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-2756/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 2758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-634-1	FS10	Total/NA	Solid	8021B	2765
890-634-2	FS11	Total/NA	Solid	8021B	2765
MB 880-2756/5-A	Method Blank	Total/NA	Solid	8021B	2756
MB 880-2765/5-A	Method Blank	Total/NA	Solid	8021B	2765
LCS 880-2765/1-A	Lab Control Sample	Total/NA	Solid	8021B	2765
LCSD 880-2765/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2765
890-634-1 MS	FS10	Total/NA	Solid	8021B	2765
890-634-1 MSD	FS10	Total/NA	Solid	8021B	2765

Prep Batch: 2765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-634-1	FS10	Total/NA	Solid	5035	
890-634-2	FS11	Total/NA	Solid	5035	
MB 880-2765/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2765/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2765/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-634-1 MS	FS10	Total/NA	Solid	5035	
890-634-1 MSD	FS10	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 2790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-634-1	FS10	Total/NA	Solid	8015NM Prep	
890-634-2	FS11	Total/NA	Solid	8015NM Prep	
MB 880-2790/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2790/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2790/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 2804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-634-1	FS10	Total/NA	Solid	8015B NM	2790
890-634-2	FS11	Total/NA	Solid	8015B NM	2790
MB 880-2790/1-A	Method Blank	Total/NA	Solid	8015B NM	2790
LCS 880-2790/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2790
LCSD 880-2790/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2790

HPLC/IC

Leach Batch: 2809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-634-1	FS10	Soluble	Solid	DI Leach	
890-634-2	FS11	Soluble	Solid	DI Leach	
MB 880-2809/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2809/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2809/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-634-1 MS	FS10	Soluble	Solid	DI Leach	
890-634-1 MSD	FS10	Soluble	Solid	DI Leach	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-634-1
SDG: TE012919259

HPLC/IC

Analysis Batch: 2819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-634-1	FS10	Soluble	Solid	300.0	2809
890-634-2	FS11	Soluble	Solid	300.0	2809
MB 880-2809/1-A	Method Blank	Soluble	Solid	300.0	2809
LCS 880-2809/2-A	Lab Control Sample	Soluble	Solid	300.0	2809
LCSD 880-2809/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2809
890-634-1 MS	FS10	Soluble	Solid	300.0	2809
890-634-1 MSD	FS10	Soluble	Solid	300.0	2809

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Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-634-1
SDG: TE012919259

Client Sample ID: FS10

Lab Sample ID: 890-634-1

Date Collected: 05/05/21 11:10

Matrix: Solid

Date Received: 05/06/21 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/06/21 23:08	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 05:56	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 16:52	SC	XM

Client Sample ID: FS11

Lab Sample ID: 890-634-2

Date Collected: 05/05/21 12:05

Matrix: Solid

Date Received: 05/06/21 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/06/21 23:28	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 06:17	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 17:08	SC	XM

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-634-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-634-1
SDG: TE012919259

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-634-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-634-1	FS10	Solid	05/05/21 11:10	05/06/21 10:35	- 1
890-634-2	FS11	Solid	05/05/21 12:05	05/06/21 10:35	- 1

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Environment Testing
Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: _____

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Project Manager:	JOSEPH HERVADEZ	Bill to: (if different)	KYLE LITTELL
Company Name:	WSP USA	Company Name:	XTO ENERGY
Address:	3300 NORTH A ST	Address:	3104 E GREENE ST
City, State ZIP:	MIDLAND, TX 79705	City, State ZIP:	CARLSBAD, NM 88220
Phone:	(281) 702-2329	Email:	anna.byres@wsp.com

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

Project Name:	JRU DI 1	Turn Around	Pres. Code	ANALYSIS REQUEST	Preservative Codes
Project Number:	TEP12919259	<input type="checkbox"/> Routine <input checked="" type="checkbox"/> Rush			None: NO DI Water: H ₂ O Cool: Cool MeOH: Me HCL: HC HNO ₃ : HN H ₂ SO ₄ : H ₂ NaOH: Na H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₅ : NASO ₅ Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAPC
Project Location:	EDDY COUNTY	Due Date:	24 HRS		
Sampler's Name:	ANNA BYRES	TAT starts the day received by the lab, if received by 4:30pm			
PO #:	NR120023417253	Temp Blank:	Yes No	Well Ice:	Yes No
SAMPLE RECEIPT		Samples Received Intact:	Yes No	Thermometer ID:	0-4
		Cooler Custody Seals:	Yes No	Correction Factor:	0.4
		Sample Custody Seals:	Yes No	Temperature Reading:	
		Total Containers:	Yes No	Corrected Temperature:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	TPH (EPA 8415 Mod)	BTEX (EPA 8021 B)	Chloride (EPA 302.0)
ES10	S	5/5/21	11:08	1'	Comp	1	X	X	X
FS11	S	5/5/21	12:05	1'	Comp	1	X	X	X



Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SIO₂ Na-Sr-Ti Sn U V Zn

Chain Method(s) and Matrix(es) to be analyzed: TCEP/SPCP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631/245.1/7470/7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins 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 Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Anna Byres</i>	<i>Joe Camp</i>	5.6.21/1035			

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-634-1

SDG Number: TE012919259

Login Number: 634

List Number: 1

Creator: Ordonez, Gabby

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-634-1
SDG Number: TE012919259

Login Number: 634
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 05/06/21 03:52 PM

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

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-635-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU D11

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

Attn: Dan Moir

Authorized for release by:
5/10/2021 10:13:50 AM

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



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

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

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Client: WSP USA Inc.
Project/Site: JRU DI1

Laboratory Job ID: 890-635-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-635-1
SDG: TE012919259

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high 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
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-635-1
SDG: TE012919259

Job ID: 890-635-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-635-1

Receipt

The sample was received on 5/6/2021 10:52 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: SW09 (890-635-1).

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

Method 300_ORGFM_28D: The matrix spike (MS) recoveries for analytical batch 880-2819 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. The associated samples are: SW09 (890-635-1) and (890-636-A-8-C). The matrix spike duplicate (MSD) recoveries for analytical batch 880-2819 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. The associated samples are: SW09 (890-635-1) and (890-636-A-8-C).

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: JRU DI1Job ID: 890-635-1
SDG: TE012919259

Client Sample ID: SW09

Lab Sample ID: 890-635-1

Date Collected: 05/04/21 09:30

Matrix: Solid

Date Received: 05/06/21 10:52

Sample Depth: 0 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/06/21 12:54	05/07/21 04:15	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/06/21 12:54	05/07/21 04:15	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/06/21 12:54	05/07/21 04:15	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		05/06/21 12:54	05/07/21 04:15	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/06/21 12:54	05/07/21 04:15	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		05/06/21 12:54	05/07/21 04:15	1
Total BTEX	<0.00397	U	0.00397	mg/Kg		05/06/21 12:54	05/07/21 04:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		70 - 130	05/06/21 12:54	05/07/21 04:15	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/06/21 12:54	05/07/21 04:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/06/21 16:34	05/08/21 09:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/06/21 16:34	05/08/21 09:25	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/06/21 16:34	05/08/21 09:25	1
Total TPH	<49.9	U	49.9	mg/Kg		05/06/21 16:34	05/08/21 09:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	130		70 - 130	05/06/21 16:34	05/08/21 09:25	1
o-Terphenyl	141	S1+	70 - 130	05/06/21 16:34	05/08/21 09:25	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	195		25.1	mg/Kg			05/07/21 14:16	5

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-635-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-635-1	SW09	126	98
LCS 880-2780/1-A	Lab Control Sample	97	105
LCSD 880-2780/2-A	Lab Control Sample Dup	97	105
MB 880-2780/5-A	Method Blank	100	99

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
890-635-1	SW09	130	141 S1+
890-635-1 MS	SW09	94	91
890-635-1 MSD	SW09	98	94
LCS 880-2793/2-A	Lab Control Sample	106	107
LCSD 880-2793/3-A	Lab Control Sample Dup	110	108
MB 880-2793/1-A	Method Blank	97	105

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-635-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2780/5-A
Matrix: Solid
Analysis Batch: 2786

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2780

Analyte	MB MB		RL	Unit	D	Prepared		Analyzed		Dil Fac
	Result	Qualifier								
Benzene	<0.00200	U	0.00200	mg/Kg		05/06/21 12:54	05/06/21 19:49	05/06/21 19:49	05/06/21 19:49	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/06/21 12:54	05/06/21 19:49	05/06/21 19:49	05/06/21 19:49	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/06/21 12:54	05/06/21 19:49	05/06/21 19:49	05/06/21 19:49	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/06/21 12:54	05/06/21 19:49	05/06/21 19:49	05/06/21 19:49	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/06/21 12:54	05/06/21 19:49	05/06/21 19:49	05/06/21 19:49	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/06/21 12:54	05/06/21 19:49	05/06/21 19:49	05/06/21 19:49	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/06/21 12:54	05/06/21 19:49	05/06/21 19:49	05/06/21 19:49	1

Surrogate	MB MB		Limits	Prepared		Analyzed		Dil Fac
	%Recovery	Qualifier						
4-Bromofluorobenzene (Surr)	100		70 - 130	05/06/21 12:54	05/06/21 19:49	05/06/21 19:49	05/06/21 19:49	1
1,4-Difluorobenzene (Surr)	99		70 - 130	05/06/21 12:54	05/06/21 19:49	05/06/21 19:49	05/06/21 19:49	1

Lab Sample ID: LCS 880-2780/1-A
Matrix: Solid
Analysis Batch: 2786

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2780

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Benzene	0.100	0.08101		mg/Kg		81	70 - 130	
Toluene	0.100	0.08695		mg/Kg		87	70 - 130	
Ethylbenzene	0.100	0.09459		mg/Kg		95	70 - 130	
m-Xylene & p-Xylene	0.200	0.1919		mg/Kg		96	70 - 130	
o-Xylene	0.100	0.09476		mg/Kg		95	70 - 130	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: LCSD 880-2780/2-A
Matrix: Solid
Analysis Batch: 2786

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2780

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	
									RPD	Limit
Benzene	0.100	0.08109		mg/Kg		81	70 - 130	0	35	
Toluene	0.100	0.08685		mg/Kg		87	70 - 130	0	35	
Ethylbenzene	0.100	0.09427		mg/Kg		94	70 - 130	0	35	
m-Xylene & p-Xylene	0.200	0.1899		mg/Kg		95	70 - 130	1	35	
o-Xylene	0.100	0.09348		mg/Kg		93	70 - 130	1	35	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-635-1
SDG: TE012919259

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

Lab Sample ID: MB 880-2793/1-A
Matrix: Solid
Analysis Batch: 2812

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2793

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/21 16:34	05/07/21 11:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/21 16:34	05/07/21 11:15	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/21 16:34	05/07/21 11:15	1
Total TPH	<50.0	U	50.0	mg/Kg		05/06/21 16:34	05/07/21 11:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	05/06/21 16:34	05/07/21 11:15	1
o-Terphenyl	105		70 - 130	05/06/21 16:34	05/07/21 11:15	1

Lab Sample ID: LCS 880-2793/2-A
Matrix: Solid
Analysis Batch: 2812

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2793

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	933.4		mg/Kg		93	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1115		mg/Kg		111	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	107		70 - 130

Lab Sample ID: LCSD 880-2793/3-A
Matrix: Solid
Analysis Batch: 2812

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2793

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	985.1		mg/Kg		99	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	1151		mg/Kg		115	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	110		70 - 130
o-Terphenyl	108		70 - 130

Lab Sample ID: 890-635-1 MS
Matrix: Solid
Analysis Batch: 2812

Client Sample ID: SW09
Prep Type: Total/NA
Prep Batch: 2793

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	749.7		mg/Kg		75	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	998	952.4		mg/Kg		92	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-635-1
SDG: TE012919259

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

Lab Sample ID: 890-635-1 MS
Matrix: Solid
Analysis Batch: 2812

Client Sample ID: SW09
Prep Type: Total/NA
Prep Batch: 2793

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	94		70 - 130
o-Terphenyl	91		70 - 130

Lab Sample ID: 890-635-1 MSD
Matrix: Solid
Analysis Batch: 2812

Client Sample ID: SW09
Prep Type: Total/NA
Prep Batch: 2793

Analyte	Sample	Sample	Spike	MSD MSD		Unit	D	%Rec	%Rec.		RPD	
	Result	Qualifier		Result	Qualifier				Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	781.3		mg/Kg		78	70 - 130	4	20	
Diesel Range Organics (Over C10-C28)	<49.9	U	998	983.6		mg/Kg		95	70 - 130	3	20	

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	98		70 - 130
o-Terphenyl	94		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2809/1-A
Matrix: Solid
Analysis Batch: 2819

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Chloride	<5.00	U	5.00	mg/Kg			05/07/21 13:38	1

Lab Sample ID: LCS 880-2809/2-A
Matrix: Solid
Analysis Batch: 2819

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike	LCS LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
Chloride	250	233.7		mg/Kg		93	90 - 110	

Lab Sample ID: LCSD 880-2809/3-A
Matrix: Solid
Analysis Batch: 2819

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

Analyte	Spike	LCSD LCSD		Unit	D	%Rec	%Rec.		RPD	
		Result	Qualifier				Limits	RPD	Limit	
Chloride	250	232.2		mg/Kg		93	90 - 110	1	20	

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-635-1
SDG: TE012919259

GC VOA

Prep Batch: 2780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-635-1	SW09	Total/NA	Solid	5035	
MB 880-2780/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2780/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2780/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 2786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-635-1	SW09	Total/NA	Solid	8021B	2780
MB 880-2780/5-A	Method Blank	Total/NA	Solid	8021B	2780
LCS 880-2780/1-A	Lab Control Sample	Total/NA	Solid	8021B	2780
LCSD 880-2780/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2780

GC Semi VOA

Prep Batch: 2793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-635-1	SW09	Total/NA	Solid	8015NM Prep	
MB 880-2793/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2793/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2793/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-635-1 MS	SW09	Total/NA	Solid	8015NM Prep	
890-635-1 MSD	SW09	Total/NA	Solid	8015NM Prep	

Analysis Batch: 2812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-635-1	SW09	Total/NA	Solid	8015B NM	2793
MB 880-2793/1-A	Method Blank	Total/NA	Solid	8015B NM	2793
LCS 880-2793/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2793
LCSD 880-2793/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2793
890-635-1 MS	SW09	Total/NA	Solid	8015B NM	2793
890-635-1 MSD	SW09	Total/NA	Solid	8015B NM	2793

HPLC/IC

Leach Batch: 2809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-635-1	SW09	Soluble	Solid	DI Leach	
MB 880-2809/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2809/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2809/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 2819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-635-1	SW09	Soluble	Solid	300.0	2809
MB 880-2809/1-A	Method Blank	Soluble	Solid	300.0	2809
LCS 880-2809/2-A	Lab Control Sample	Soluble	Solid	300.0	2809
LCSD 880-2809/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2809

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-635-1
SDG: TE012919259

Client Sample ID: SW09

Lab Sample ID: 890-635-1

Date Collected: 05/04/21 09:30

Matrix: Solid

Date Received: 05/06/21 10:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2780	05/06/21 12:54	MR	XM
Total/NA	Analysis	8021B		1	2786	05/07/21 04:15	MR	XM
Total/NA	Prep	8015NM Prep			2793	05/06/21 16:34	DM	XM
Total/NA	Analysis	8015B NM		1	2812	05/08/21 09:25	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		5	2819	05/07/21 14:16	SC	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: JRU DI1

Job ID: 890-635-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-635-1
SDG: TE012919259

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-635-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-635-1	SW09	Solid	05/04/21 09:30	05/06/21 10:52	0 - 3

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

Chain of Custody

Work Order No: _____

www.xenco.com Page _____ of _____

Project Manager: Dan Moir
Company Name: LT Environmental, Inc., Permian office
Address: 3300 North A Street
City, State ZIP: Midland, TX 79705
Phone: 432.236.3849
Bill to: (if different) Kyle Littell
Company Name: XTO Energy
Address: 3104 E Green Street
City, State ZIP: Carlsbad, NM 88220
Email: lbell@ltenv.com

Program: UST/PST PRP Brownfields RC Superfund
State of Project: Level II Level III S/T/UST RRP Level IV
Reporting Level: EDD ADAPT Other: _____
Deliverables: EDD ADAPT Other: _____

Project Name: TRU OTE
Project Number: 7E012919259
P.O. Number: NRM2002797253
Sampler's Name: Benjamin Bellill
Turn Around: Routine
Rush: 24HR
Due Date: _____

SAMPLE RECEIPT
Temperature (°C): 10/0.8
Received Inact: Yes No
Cooler Custody Seals: Yes No
Sample Custody Seals: Yes No
Temp Blank: Yes No
Wet Ice: Yes No
Thermometer ID: T-111-007
Correction Factor: _____
Total Containers: _____

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers		
					TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)
SW07	S	5/11/21	0930	0-3'	1	XX	K
<i>Handwritten notes: 1088 S/11/21</i>							

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SIO2 Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 . Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	5/11/21	<i>[Signature]</i>	<i>[Signature]</i>	



Work Order Notes: AEE EW202101559, EPP01
Est. Cust. 108 25/1001
TAT starts the day received by the lab, if received by 4:30pm

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-635-1
SDG Number: TE012919259

Login Number: 635
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-635-1
SDG Number: TE012919259

Login Number: 635
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 05/06/21 03:51 PM

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

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-636-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU D11

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

Attn: Dan Moir

Authorized for release by:
5/10/2021 10:20:18 AM

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



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

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

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Client: WSP USA Inc.
Project/Site: JRU DI1

Laboratory Job ID: 890-636-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-636-1
SDG: TE012919259

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-636-1
SDG: TE012919259

Job ID: 890-636-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-636-1

Comments

No additional comments.

Receipt

The samples were received on 5/6/2021 10:50 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 was 0.8° C.

GC VOA

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

GC Semi VOA

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

General Chemistry

Method 300.0: The matrix spike (MS) recoveries for analytical batch 880-2819 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

The associated samples are: FS01 (890-636-1), FS02 (890-636-2), FS03 (890-636-3), FS04 (890-636-4), FS05 (890-636-5), FS06 (890-636-6), FS07 (890-636-7), FS08 (890-636-8), FS09 (890-636-9), FS10 (890-636-10), FS11 (890-636-11), FS12 (890-636-12), FS13 (890-636-13), FS14 (890-636-14), FS15 (890-636-15), FS16 (890-636-16) and FS17 (890-636-17).

The matrix spike duplicate (MSD) recoveries for analytical batch 880-2819 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

The associated samples are: FS01 (890-636-1), FS02 (890-636-2), FS03 (890-636-3), FS04 (890-636-4), FS05 (890-636-5), FS06 (890-636-6), FS07 (890-636-7), FS08 (890-636-8), FS09 (890-636-9), FS10 (890-636-10), FS11 (890-636-11), FS12 (890-636-12), FS13 (890-636-13), FS14 (890-636-14), FS15 (890-636-15), FS16 (890-636-16) and FS17 (890-636-17).

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

Organic Prep

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

VOA Prep

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



Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS01

Lab Sample ID: 890-636-1

Date Collected: 05/03/21 11:00

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/06/21 23:48	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/06/21 23:48	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/06/21 23:48	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/06/21 23:48	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/06/21 23:48	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/06/21 23:48	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/06/21 23:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	05/06/21 15:00	05/06/21 23:48	1
1,4-Difluorobenzene (Surr)	96		70 - 130	05/06/21 15:00	05/06/21 23:48	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/06/21 22:39	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/06/21 22:39	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/06/21 22:39	1
Total TPH	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/06/21 22:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	05/06/21 16:20	05/06/21 22:39	1
o-Terphenyl	103		70 - 130	05/06/21 16:20	05/06/21 22:39	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	242		4.98	mg/Kg			05/07/21 14:21	1

Client Sample ID: FS02

Lab Sample ID: 890-636-2

Date Collected: 05/03/21 11:20

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/06/21 15:00	05/07/21 00:09	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/06/21 15:00	05/07/21 00:09	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/06/21 15:00	05/07/21 00:09	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		05/06/21 15:00	05/07/21 00:09	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/06/21 15:00	05/07/21 00:09	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		05/06/21 15:00	05/07/21 00:09	1
Total BTEX	<0.00397	U	0.00397	mg/Kg		05/06/21 15:00	05/07/21 00:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	05/06/21 15:00	05/07/21 00:09	1
1,4-Difluorobenzene (Surr)	97		70 - 130	05/06/21 15:00	05/07/21 00:09	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS02

Lab Sample ID: 890-636-2

Date Collected: 05/03/21 11:20

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/06/21 23:41	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/06/21 23:41	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/06/21 23:41	1
Total TPH	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/06/21 23:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	05/06/21 16:20	05/06/21 23:41	1
o-Terphenyl	108		70 - 130	05/06/21 16:20	05/06/21 23:41	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	81.7		4.95	mg/Kg			05/07/21 14:26	1

Client Sample ID: FS03

Lab Sample ID: 890-636-3

Date Collected: 05/03/21 11:30

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/06/21 15:00	05/07/21 00:29	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/06/21 15:00	05/07/21 00:29	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/06/21 15:00	05/07/21 00:29	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		05/06/21 15:00	05/07/21 00:29	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/06/21 15:00	05/07/21 00:29	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		05/06/21 15:00	05/07/21 00:29	1
Total BTEX	<0.00403	U	0.00403	mg/Kg		05/06/21 15:00	05/07/21 00:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130	05/06/21 15:00	05/07/21 00:29	1
1,4-Difluorobenzene (Surr)	95		70 - 130	05/06/21 15:00	05/07/21 00:29	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/06/21 16:20	05/07/21 00:02	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/06/21 16:20	05/07/21 00:02	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/06/21 16:20	05/07/21 00:02	1
Total TPH	<49.8	U	49.8	mg/Kg		05/06/21 16:20	05/07/21 00:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130	05/06/21 16:20	05/07/21 00:02	1
o-Terphenyl	105		70 - 130	05/06/21 16:20	05/07/21 00:02	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	262		5.05	mg/Kg			05/07/21 14:59	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS04

Lab Sample ID: 890-636-4

Date Collected: 05/03/21 11:45

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/07/21 00:50	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/07/21 00:50	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/07/21 00:50	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/07/21 00:50	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/07/21 00:50	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/07/21 00:50	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/07/21 00:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	05/06/21 15:00	05/07/21 00:50	1
1,4-Difluorobenzene (Surr)	96		70 - 130	05/06/21 15:00	05/07/21 00:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 00:23	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 00:23	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 00:23	1
Total TPH	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 00:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130	05/06/21 16:20	05/07/21 00:23	1
o-Terphenyl	106		70 - 130	05/06/21 16:20	05/07/21 00:23	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	50.1		4.98	mg/Kg			05/07/21 15:04	1

Client Sample ID: FS05

Lab Sample ID: 890-636-5

Date Collected: 05/03/21 12:00

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/07/21 01:10	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/07/21 01:10	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/07/21 01:10	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/06/21 15:00	05/07/21 01:10	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/07/21 01:10	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/06/21 15:00	05/07/21 01:10	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/06/21 15:00	05/07/21 01:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130	05/06/21 15:00	05/07/21 01:10	1
1,4-Difluorobenzene (Surr)	91		70 - 130	05/06/21 15:00	05/07/21 01:10	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS05

Lab Sample ID: 890-636-5

Date Collected: 05/03/21 12:00

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 00:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 00:44	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 00:44	1
Total TPH	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 00:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130	05/06/21 16:20	05/07/21 00:44	1
o-Terphenyl	111		70 - 130	05/06/21 16:20	05/07/21 00:44	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	452		4.97	mg/Kg			05/07/21 15:09	1

Client Sample ID: FS06

Lab Sample ID: 890-636-6

Date Collected: 05/03/21 12:30

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/06/21 15:00	05/07/21 01:30	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/06/21 15:00	05/07/21 01:30	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/06/21 15:00	05/07/21 01:30	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/06/21 15:00	05/07/21 01:30	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/06/21 15:00	05/07/21 01:30	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/06/21 15:00	05/07/21 01:30	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/06/21 15:00	05/07/21 01:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130	05/06/21 15:00	05/07/21 01:30	1
1,4-Difluorobenzene (Surr)	88		70 - 130	05/06/21 15:00	05/07/21 01:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 01:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 01:05	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 01:05	1
Total TPH	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 01:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130	05/06/21 16:20	05/07/21 01:05	1
o-Terphenyl	103		70 - 130	05/06/21 16:20	05/07/21 01:05	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	214		4.95	mg/Kg			05/07/21 15:15	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS07

Lab Sample ID: 890-636-7

Date Collected: 05/03/21 12:45

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/07/21 01:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/07/21 01:51	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/07/21 01:51	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		05/06/21 15:00	05/07/21 01:51	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/07/21 01:51	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		05/06/21 15:00	05/07/21 01:51	1
Total BTEX	<0.00401	U	0.00401	mg/Kg		05/06/21 15:00	05/07/21 01:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	05/06/21 15:00	05/07/21 01:51	1
1,4-Difluorobenzene (Surr)	101		70 - 130	05/06/21 15:00	05/07/21 01:51	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 01:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 01:26	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 01:26	1
Total TPH	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 01:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130	05/06/21 16:20	05/07/21 01:26	1
o-Terphenyl	111		70 - 130	05/06/21 16:20	05/07/21 01:26	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	125		5.00	mg/Kg			05/07/21 15:20	1

Client Sample ID: FS08

Lab Sample ID: 890-636-8

Date Collected: 05/03/21 13:00

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/07/21 02:11	1
Toluene	0.00207		0.00199	mg/Kg		05/06/21 15:00	05/07/21 02:11	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/07/21 02:11	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/07/21 02:11	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/07/21 02:11	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/07/21 02:11	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/07/21 02:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130	05/06/21 15:00	05/07/21 02:11	1
1,4-Difluorobenzene (Surr)	97		70 - 130	05/06/21 15:00	05/07/21 02:11	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS08

Lab Sample ID: 890-636-8

Date Collected: 05/03/21 13:00

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 01:47	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 01:47	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 01:47	1
Total TPH	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 01:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130	05/06/21 16:20	05/07/21 01:47	1
o-Terphenyl	98		70 - 130	05/06/21 16:20	05/07/21 01:47	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	37.1	F1	4.96	mg/Kg			05/07/21 15:26	1

Client Sample ID: FS09

Lab Sample ID: 890-636-9

Date Collected: 05/03/21 13:20

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/06/21 15:00	05/07/21 03:33	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/06/21 15:00	05/07/21 03:33	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/06/21 15:00	05/07/21 03:33	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/06/21 15:00	05/07/21 03:33	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/06/21 15:00	05/07/21 03:33	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/06/21 15:00	05/07/21 03:33	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/06/21 15:00	05/07/21 03:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	05/06/21 15:00	05/07/21 03:33	1
1,4-Difluorobenzene (Surr)	99		70 - 130	05/06/21 15:00	05/07/21 03:33	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 02:08	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 02:08	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 02:08	1
Total TPH	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 02:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130	05/06/21 16:20	05/07/21 02:08	1
o-Terphenyl	106		70 - 130	05/06/21 16:20	05/07/21 02:08	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	87.0		5.04	mg/Kg			05/07/21 15:42	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS10

Lab Sample ID: 890-636-10

Date Collected: 05/03/21 13:40

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/06/21 15:00	05/07/21 03:53	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/06/21 15:00	05/07/21 03:53	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/06/21 15:00	05/07/21 03:53	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		05/06/21 15:00	05/07/21 03:53	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/06/21 15:00	05/07/21 03:53	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		05/06/21 15:00	05/07/21 03:53	1
Total BTEX	<0.00404	U	0.00404	mg/Kg		05/06/21 15:00	05/07/21 03:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	05/06/21 15:00	05/07/21 03:53	1
1,4-Difluorobenzene (Surr)	103		70 - 130	05/06/21 15:00	05/07/21 03:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 02:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 02:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 02:28	1
Total TPH	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 02:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	05/06/21 16:20	05/07/21 02:28	1
o-Terphenyl	100		70 - 130	05/06/21 16:20	05/07/21 02:28	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	86.5		5.03	mg/Kg			05/07/21 15:47	1

Client Sample ID: FS11

Lab Sample ID: 890-636-11

Date Collected: 05/03/21 14:00

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/06/21 15:00	05/07/21 04:14	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/06/21 15:00	05/07/21 04:14	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/06/21 15:00	05/07/21 04:14	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		05/06/21 15:00	05/07/21 04:14	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/06/21 15:00	05/07/21 04:14	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		05/06/21 15:00	05/07/21 04:14	1
Total BTEX	<0.00404	U	0.00404	mg/Kg		05/06/21 15:00	05/07/21 04:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	05/06/21 15:00	05/07/21 04:14	1
1,4-Difluorobenzene (Surr)	99		70 - 130	05/06/21 15:00	05/07/21 04:14	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS11

Lab Sample ID: 890-636-11

Date Collected: 05/03/21 14:00

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 03:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 03:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 03:10	1
Total TPH	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 03:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	05/06/21 16:20	05/07/21 03:10	1
o-Terphenyl	103		70 - 130	05/06/21 16:20	05/07/21 03:10	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	124		5.05	mg/Kg			05/07/21 16:03	1

Client Sample ID: FS12

Lab Sample ID: 890-636-12

Date Collected: 05/03/21 14:15

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/07/21 04:34	1
Toluene	0.00200		0.00199	mg/Kg		05/06/21 15:00	05/07/21 04:34	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/07/21 04:34	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/07/21 04:34	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/07/21 04:34	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/07/21 04:34	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/07/21 04:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	05/06/21 15:00	05/07/21 04:34	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/06/21 15:00	05/07/21 04:34	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 03:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 03:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 03:31	1
Total TPH	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 03:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130	05/06/21 16:20	05/07/21 03:31	1
o-Terphenyl	116		70 - 130	05/06/21 16:20	05/07/21 03:31	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14.8		5.05	mg/Kg			05/07/21 16:09	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS13

Lab Sample ID: 890-636-13

Date Collected: 05/03/21 14:35

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/07/21 04:55	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/07/21 04:55	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/07/21 04:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/06/21 15:00	05/07/21 04:55	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/07/21 04:55	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/06/21 15:00	05/07/21 04:55	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/06/21 15:00	05/07/21 04:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	05/06/21 15:00	05/07/21 04:55	1
1,4-Difluorobenzene (Surr)	94		70 - 130	05/06/21 15:00	05/07/21 04:55	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 03:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 03:52	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 03:52	1
Total TPH	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 03:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130	05/06/21 16:20	05/07/21 03:52	1
o-Terphenyl	112		70 - 130	05/06/21 16:20	05/07/21 03:52	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	79.2		5.00	mg/Kg			05/07/21 16:14	1

Client Sample ID: FS14

Lab Sample ID: 890-636-14

Date Collected: 05/03/21 14:50

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 4.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/06/21 15:00	05/07/21 05:15	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/06/21 15:00	05/07/21 05:15	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/06/21 15:00	05/07/21 05:15	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		05/06/21 15:00	05/07/21 05:15	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/06/21 15:00	05/07/21 05:15	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		05/06/21 15:00	05/07/21 05:15	1
Total BTEX	<0.00397	U	0.00397	mg/Kg		05/06/21 15:00	05/07/21 05:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	05/06/21 15:00	05/07/21 05:15	1
1,4-Difluorobenzene (Surr)	92		70 - 130	05/06/21 15:00	05/07/21 05:15	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS14

Lab Sample ID: 890-636-14

Date Collected: 05/03/21 14:50

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 4.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 04:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 04:12	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 04:12	1
Total TPH	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 04:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130	05/06/21 16:20	05/07/21 04:12	1
o-Terphenyl	107		70 - 130	05/06/21 16:20	05/07/21 04:12	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	30.4		4.98	mg/Kg			05/07/21 16:19	1

Client Sample ID: FS15

Lab Sample ID: 890-636-15

Date Collected: 05/03/21 15:10

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 4.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/07/21 05:35	1
Toluene	0.00301		0.00199	mg/Kg		05/06/21 15:00	05/07/21 05:35	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/07/21 05:35	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/07/21 05:35	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/07/21 05:35	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/07/21 05:35	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/07/21 05:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	05/06/21 15:00	05/07/21 05:35	1
1,4-Difluorobenzene (Surr)	96		70 - 130	05/06/21 15:00	05/07/21 05:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 04:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 04:33	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 04:33	1
Total TPH	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 04:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	05/06/21 16:20	05/07/21 04:33	1
o-Terphenyl	102		70 - 130	05/06/21 16:20	05/07/21 04:33	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	109		4.97	mg/Kg			05/07/21 16:25	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS16

Lab Sample ID: 890-636-16

Date Collected: 05/03/21 15:30

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 4.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/07/21 05:56	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/07/21 05:56	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/07/21 05:56	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/07/21 05:56	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/06/21 15:00	05/07/21 05:56	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/07/21 05:56	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/06/21 15:00	05/07/21 05:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130	05/06/21 15:00	05/07/21 05:56	1
1,4-Difluorobenzene (Surr)	96		70 - 130	05/06/21 15:00	05/07/21 05:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 04:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 04:54	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 04:54	1
Total TPH	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 04:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130	05/06/21 16:20	05/07/21 04:54	1
o-Terphenyl	107		70 - 130	05/06/21 16:20	05/07/21 04:54	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	102		4.95	mg/Kg			05/07/21 16:30	1

Client Sample ID: FS17

Lab Sample ID: 890-636-17

Date Collected: 05/03/21 15:45

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 4.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/06/21 15:00	05/07/21 06:16	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/06/21 15:00	05/07/21 06:16	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/06/21 15:00	05/07/21 06:16	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/06/21 15:00	05/07/21 06:16	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/06/21 15:00	05/07/21 06:16	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/06/21 15:00	05/07/21 06:16	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/06/21 15:00	05/07/21 06:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130	05/06/21 15:00	05/07/21 06:16	1
1,4-Difluorobenzene (Surr)	95		70 - 130	05/06/21 15:00	05/07/21 06:16	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS17

Lab Sample ID: 890-636-17

Date Collected: 05/03/21 15:45

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 4.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 05:14	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 05:14	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 05:14	1
Total TPH	<49.9	U	49.9	mg/Kg		05/06/21 16:20	05/07/21 05:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130	05/06/21 16:20	05/07/21 05:14	1
o-Terphenyl	111		70 - 130	05/06/21 16:20	05/07/21 05:14	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	235		5.00	mg/Kg			05/07/21 16:36	1

Client Sample ID: FS18

Lab Sample ID: 890-636-18

Date Collected: 05/03/21 16:00

Matrix: Solid

Date Received: 05/06/21 10:50

Sample Depth: - 4.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/06/21 15:00	05/07/21 06:37	1
Toluene	0.00203		0.00201	mg/Kg		05/06/21 15:00	05/07/21 06:37	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/06/21 15:00	05/07/21 06:37	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/06/21 15:00	05/07/21 06:37	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/06/21 15:00	05/07/21 06:37	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/06/21 15:00	05/07/21 06:37	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/06/21 15:00	05/07/21 06:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	05/06/21 15:00	05/07/21 06:37	1
1,4-Difluorobenzene (Surr)	96		70 - 130	05/06/21 15:00	05/07/21 06:37	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 05:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 05:35	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 05:35	1
Total TPH	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/07/21 05:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130	05/06/21 16:20	05/07/21 05:35	1
o-Terphenyl	111		70 - 130	05/06/21 16:20	05/07/21 05:35	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	33.8		5.04	mg/Kg			05/07/21 11:19	1

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-636-1	FS01	96	96
890-636-2	FS02	95	97
890-636-3	FS03	90	95
890-636-4	FS04	95	96
890-636-5	FS05	90	91
890-636-6	FS06	89	88
890-636-7	FS07	108	101
890-636-8	FS08	89	97
890-636-9	FS09	92	99
890-636-10	FS10	101	103
890-636-11	FS11	98	99
890-636-12	FS12	101	98
890-636-13	FS13	95	94
890-636-14	FS14	98	92
890-636-15	FS15	97	96
890-636-16	FS16	94	96
890-636-17	FS17	91	95
890-636-18	FS18	103	96
LCS 880-2765/1-A	Lab Control Sample	110	106
LCS 880-2765/2-A	Lab Control Sample Dup	111	105
MB 880-2756/5-A	Method Blank	91	93
MB 880-2765/5-A	Method Blank	88	91

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-636-1	FS01	103	103
890-636-1 MS	FS01	97	90
890-636-1 MSD	FS01	93	86
890-636-2	FS02	106	108
890-636-3	FS03	104	105
890-636-4	FS04	105	106
890-636-5	FS05	114	111
890-636-6	FS06	104	103
890-636-7	FS07	108	111
890-636-8	FS08	99	98
890-636-9	FS09	105	106
890-636-10	FS10	106	100
890-636-11	FS11	106	103
890-636-12	FS12	115	116
890-636-13	FS13	115	112
890-636-14	FS14	105	107
890-636-15	FS15	103	102

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Surrogate Summary

Client: WSP USA Inc.
 Project/Site: JRU DI1

Job ID: 890-636-1
 SDG: TE012919259

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-636-16	FS16	108	107
890-636-17	FS17	111	111
890-636-18	FS18	112	111
LCS 880-2790/2-A	Lab Control Sample	103	98
LCSD 880-2790/3-A	Lab Control Sample Dup	103	100
MB 880-2790/1-A	Method Blank	95	101

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-636-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2756/5-A
Matrix: Solid
Analysis Batch: 2758

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2756

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/06/21 08:25	05/06/21 11:55	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/06/21 08:25	05/06/21 11:55	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/06/21 08:25	05/06/21 11:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/06/21 08:25	05/06/21 11:55	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/06/21 08:25	05/06/21 11:55	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/06/21 08:25	05/06/21 11:55	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/06/21 08:25	05/06/21 11:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130	05/06/21 08:25	05/06/21 11:55	1
1,4-Difluorobenzene (Surr)	93		70 - 130	05/06/21 08:25	05/06/21 11:55	1

Lab Sample ID: MB 880-2765/5-A
Matrix: Solid
Analysis Batch: 2758

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2765

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/06/21 22:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/06/21 22:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/06/21 22:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/06/21 15:00	05/06/21 22:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/06/21 15:00	05/06/21 22:46	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/06/21 15:00	05/06/21 22:46	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/06/21 15:00	05/06/21 22:46	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130	05/06/21 15:00	05/06/21 22:46	1
1,4-Difluorobenzene (Surr)	91		70 - 130	05/06/21 15:00	05/06/21 22:46	1

Lab Sample ID: LCS 880-2765/1-A
Matrix: Solid
Analysis Batch: 2758

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2765

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.1077		mg/Kg		108	70 - 130
Toluene	0.100	0.1041		mg/Kg		104	70 - 130
Ethylbenzene	0.100	0.1078		mg/Kg		108	70 - 130
m-Xylene & p-Xylene	0.200	0.2307		mg/Kg		115	70 - 130
o-Xylene	0.100	0.1172		mg/Kg		117	70 - 130

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

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-636-1
SDG: TE012919259

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

Lab Sample ID: LCSD 880-2765/2-A
Matrix: Solid
Analysis Batch: 2758

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2765

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.1110		mg/Kg		111	70 - 130	3	35
Toluene	0.100	0.1070		mg/Kg		107	70 - 130	3	35
Ethylbenzene	0.100	0.1089		mg/Kg		109	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.2334		mg/Kg		117	70 - 130	1	35
o-Xylene	0.100	0.1185		mg/Kg		118	70 - 130	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

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

Lab Sample ID: MB 880-2790/1-A
Matrix: Solid
Analysis Batch: 2804

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2790

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/06/21 21:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/06/21 21:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/06/21 21:36	1
Total TPH	<50.0	U	50.0	mg/Kg		05/06/21 16:20	05/06/21 21:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130	05/06/21 16:20	05/06/21 21:36	1
o-Terphenyl	101		70 - 130	05/06/21 16:20	05/06/21 21:36	1

Lab Sample ID: LCS 880-2790/2-A
Matrix: Solid
Analysis Batch: 2804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2790

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	867.9		mg/Kg		87	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1022		mg/Kg		102	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: LCSD 880-2790/3-A
Matrix: Solid
Analysis Batch: 2804

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2790

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	871.3		mg/Kg		87	70 - 130	0	20

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-636-1
SDG: TE012919259

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

Lab Sample ID: LCSD 880-2790/3-A
Matrix: Solid
Analysis Batch: 2804

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2790

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (Over C10-C28)	1000	1023		mg/Kg		102	70 - 130	0	20
Surrogate		LCSD %Recovery	LCSD Qualifier				Limits		
1-Chlorooctane		103					70 - 130		
o-Terphenyl		100					70 - 130		

Lab Sample ID: 890-636-1 MS
Matrix: Solid
Analysis Batch: 2804

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 2790

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	848.3		mg/Kg		85	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1071		mg/Kg		107	70 - 130		
Surrogate		MS %Recovery	MS Qualifier						Limits		
1-Chlorooctane		97							70 - 130		
o-Terphenyl		90							70 - 130		

Lab Sample ID: 890-636-1 MSD
Matrix: Solid
Analysis Batch: 2804

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 2790

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	829.0		mg/Kg		83	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1030		mg/Kg		103	70 - 130	4	20
Surrogate		MSD %Recovery	MSD Qualifier						Limits		
1-Chlorooctane		93							70 - 130		
o-Terphenyl		86							70 - 130		

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2803/1-A
Matrix: Solid
Analysis Batch: 2806

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/07/21 09:29	1

Lab Sample ID: LCS 880-2803/2-A
Matrix: Solid
Analysis Batch: 2806

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	240.8		mg/Kg		96	90 - 110

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-636-1
SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCSD 880-2803/3-A
Matrix: Solid
Analysis Batch: 2806

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	240.3		mg/Kg		96	90 - 110	0	20

Lab Sample ID: MB 880-2809/1-A
Matrix: Solid
Analysis Batch: 2819

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/07/21 13:38	1

Lab Sample ID: LCS 880-2809/2-A
Matrix: Solid
Analysis Batch: 2819

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	233.7		mg/Kg		93	90 - 110

Lab Sample ID: LCSD 880-2809/3-A
Matrix: Solid
Analysis Batch: 2819

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	232.2		mg/Kg		93	90 - 110	1	20

Lab Sample ID: 890-636-8 MS
Matrix: Solid
Analysis Batch: 2819

Client Sample ID: FS08
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	37.1	F1	248	362.7	F1	mg/Kg		131	90 - 110

Lab Sample ID: 890-636-8 MSD
Matrix: Solid
Analysis Batch: 2819

Client Sample ID: FS08
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	37.1	F1	248	377.2	F1	mg/Kg		137	90 - 110	4	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

GC VOA

Prep Batch: 2756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-2756/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 2758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-636-1	FS01	Total/NA	Solid	8021B	2765
890-636-2	FS02	Total/NA	Solid	8021B	2765
890-636-3	FS03	Total/NA	Solid	8021B	2765
890-636-4	FS04	Total/NA	Solid	8021B	2765
890-636-5	FS05	Total/NA	Solid	8021B	2765
890-636-6	FS06	Total/NA	Solid	8021B	2765
890-636-7	FS07	Total/NA	Solid	8021B	2765
890-636-8	FS08	Total/NA	Solid	8021B	2765
890-636-9	FS09	Total/NA	Solid	8021B	2765
890-636-10	FS10	Total/NA	Solid	8021B	2765
890-636-11	FS11	Total/NA	Solid	8021B	2765
890-636-12	FS12	Total/NA	Solid	8021B	2765
890-636-13	FS13	Total/NA	Solid	8021B	2765
890-636-14	FS14	Total/NA	Solid	8021B	2765
890-636-15	FS15	Total/NA	Solid	8021B	2765
890-636-16	FS16	Total/NA	Solid	8021B	2765
890-636-17	FS17	Total/NA	Solid	8021B	2765
890-636-18	FS18	Total/NA	Solid	8021B	2765
MB 880-2756/5-A	Method Blank	Total/NA	Solid	8021B	2756
MB 880-2765/5-A	Method Blank	Total/NA	Solid	8021B	2765
LCS 880-2765/1-A	Lab Control Sample	Total/NA	Solid	8021B	2765
LCSD 880-2765/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2765

Prep Batch: 2765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-636-1	FS01	Total/NA	Solid	5035	
890-636-2	FS02	Total/NA	Solid	5035	
890-636-3	FS03	Total/NA	Solid	5035	
890-636-4	FS04	Total/NA	Solid	5035	
890-636-5	FS05	Total/NA	Solid	5035	
890-636-6	FS06	Total/NA	Solid	5035	
890-636-7	FS07	Total/NA	Solid	5035	
890-636-8	FS08	Total/NA	Solid	5035	
890-636-9	FS09	Total/NA	Solid	5035	
890-636-10	FS10	Total/NA	Solid	5035	
890-636-11	FS11	Total/NA	Solid	5035	
890-636-12	FS12	Total/NA	Solid	5035	
890-636-13	FS13	Total/NA	Solid	5035	
890-636-14	FS14	Total/NA	Solid	5035	
890-636-15	FS15	Total/NA	Solid	5035	
890-636-16	FS16	Total/NA	Solid	5035	
890-636-17	FS17	Total/NA	Solid	5035	
890-636-18	FS18	Total/NA	Solid	5035	
MB 880-2765/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2765/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2765/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

GC Semi VOA

Prep Batch: 2790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-636-1	FS01	Total/NA	Solid	8015NM Prep	
890-636-2	FS02	Total/NA	Solid	8015NM Prep	
890-636-3	FS03	Total/NA	Solid	8015NM Prep	
890-636-4	FS04	Total/NA	Solid	8015NM Prep	
890-636-5	FS05	Total/NA	Solid	8015NM Prep	
890-636-6	FS06	Total/NA	Solid	8015NM Prep	
890-636-7	FS07	Total/NA	Solid	8015NM Prep	
890-636-8	FS08	Total/NA	Solid	8015NM Prep	
890-636-9	FS09	Total/NA	Solid	8015NM Prep	
890-636-10	FS10	Total/NA	Solid	8015NM Prep	
890-636-11	FS11	Total/NA	Solid	8015NM Prep	
890-636-12	FS12	Total/NA	Solid	8015NM Prep	
890-636-13	FS13	Total/NA	Solid	8015NM Prep	
890-636-14	FS14	Total/NA	Solid	8015NM Prep	
890-636-15	FS15	Total/NA	Solid	8015NM Prep	
890-636-16	FS16	Total/NA	Solid	8015NM Prep	
890-636-17	FS17	Total/NA	Solid	8015NM Prep	
890-636-18	FS18	Total/NA	Solid	8015NM Prep	
MB 880-2790/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2790/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2790/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-636-1 MS	FS01	Total/NA	Solid	8015NM Prep	
890-636-1 MSD	FS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 2804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-636-1	FS01	Total/NA	Solid	8015B NM	2790
890-636-2	FS02	Total/NA	Solid	8015B NM	2790
890-636-3	FS03	Total/NA	Solid	8015B NM	2790
890-636-4	FS04	Total/NA	Solid	8015B NM	2790
890-636-5	FS05	Total/NA	Solid	8015B NM	2790
890-636-6	FS06	Total/NA	Solid	8015B NM	2790
890-636-7	FS07	Total/NA	Solid	8015B NM	2790
890-636-8	FS08	Total/NA	Solid	8015B NM	2790
890-636-9	FS09	Total/NA	Solid	8015B NM	2790
890-636-10	FS10	Total/NA	Solid	8015B NM	2790
890-636-11	FS11	Total/NA	Solid	8015B NM	2790
890-636-12	FS12	Total/NA	Solid	8015B NM	2790
890-636-13	FS13	Total/NA	Solid	8015B NM	2790
890-636-14	FS14	Total/NA	Solid	8015B NM	2790
890-636-15	FS15	Total/NA	Solid	8015B NM	2790
890-636-16	FS16	Total/NA	Solid	8015B NM	2790
890-636-17	FS17	Total/NA	Solid	8015B NM	2790
890-636-18	FS18	Total/NA	Solid	8015B NM	2790
MB 880-2790/1-A	Method Blank	Total/NA	Solid	8015B NM	2790
LCS 880-2790/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2790
LCSD 880-2790/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2790
890-636-1 MS	FS01	Total/NA	Solid	8015B NM	2790
890-636-1 MSD	FS01	Total/NA	Solid	8015B NM	2790

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

HPLC/IC

Leach Batch: 2803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-636-18	FS18	Soluble	Solid	DI Leach	
MB 880-2803/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2803/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2803/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 2806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-636-18	FS18	Soluble	Solid	300.0	2803
MB 880-2803/1-A	Method Blank	Soluble	Solid	300.0	2803
LCS 880-2803/2-A	Lab Control Sample	Soluble	Solid	300.0	2803
LCSD 880-2803/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2803

Leach Batch: 2809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-636-1	FS01	Soluble	Solid	DI Leach	
890-636-2	FS02	Soluble	Solid	DI Leach	
890-636-3	FS03	Soluble	Solid	DI Leach	
890-636-4	FS04	Soluble	Solid	DI Leach	
890-636-5	FS05	Soluble	Solid	DI Leach	
890-636-6	FS06	Soluble	Solid	DI Leach	
890-636-7	FS07	Soluble	Solid	DI Leach	
890-636-8	FS08	Soluble	Solid	DI Leach	
890-636-9	FS09	Soluble	Solid	DI Leach	
890-636-10	FS10	Soluble	Solid	DI Leach	
890-636-11	FS11	Soluble	Solid	DI Leach	
890-636-12	FS12	Soluble	Solid	DI Leach	
890-636-13	FS13	Soluble	Solid	DI Leach	
890-636-14	FS14	Soluble	Solid	DI Leach	
890-636-15	FS15	Soluble	Solid	DI Leach	
890-636-16	FS16	Soluble	Solid	DI Leach	
890-636-17	FS17	Soluble	Solid	DI Leach	
MB 880-2809/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2809/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2809/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-636-8 MS	FS08	Soluble	Solid	DI Leach	
890-636-8 MSD	FS08	Soluble	Solid	DI Leach	

Analysis Batch: 2819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-636-1	FS01	Soluble	Solid	300.0	2809
890-636-2	FS02	Soluble	Solid	300.0	2809
890-636-3	FS03	Soluble	Solid	300.0	2809
890-636-4	FS04	Soluble	Solid	300.0	2809
890-636-5	FS05	Soluble	Solid	300.0	2809
890-636-6	FS06	Soluble	Solid	300.0	2809
890-636-7	FS07	Soluble	Solid	300.0	2809
890-636-8	FS08	Soluble	Solid	300.0	2809
890-636-9	FS09	Soluble	Solid	300.0	2809
890-636-10	FS10	Soluble	Solid	300.0	2809
890-636-11	FS11	Soluble	Solid	300.0	2809
890-636-12	FS12	Soluble	Solid	300.0	2809

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-636-1
SDG: TE012919259

HPLC/IC (Continued)

Analysis Batch: 2819 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-636-13	FS13	Soluble	Solid	300.0	2809
890-636-14	FS14	Soluble	Solid	300.0	2809
890-636-15	FS15	Soluble	Solid	300.0	2809
890-636-16	FS16	Soluble	Solid	300.0	2809
890-636-17	FS17	Soluble	Solid	300.0	2809
MB 880-2809/1-A	Method Blank	Soluble	Solid	300.0	2809
LCS 880-2809/2-A	Lab Control Sample	Soluble	Solid	300.0	2809
LCSD 880-2809/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2809
890-636-8 MS	FS08	Soluble	Solid	300.0	2809
890-636-8 MSD	FS08	Soluble	Solid	300.0	2809

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Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS01

Lab Sample ID: 890-636-1

Date Collected: 05/03/21 11:00

Matrix: Solid

Date Received: 05/06/21 10:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/06/21 23:48	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/06/21 22:39	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 14:21	SC	XM

Client Sample ID: FS02

Lab Sample ID: 890-636-2

Date Collected: 05/03/21 11:20

Matrix: Solid

Date Received: 05/06/21 10:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/07/21 00:09	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/06/21 23:41	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 14:26	SC	XM

Client Sample ID: FS03

Lab Sample ID: 890-636-3

Date Collected: 05/03/21 11:30

Matrix: Solid

Date Received: 05/06/21 10:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/07/21 00:29	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 00:02	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 14:59	SC	XM

Client Sample ID: FS04

Lab Sample ID: 890-636-4

Date Collected: 05/03/21 11:45

Matrix: Solid

Date Received: 05/06/21 10:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/07/21 00:50	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 00:23	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 15:04	SC	XM

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS05

Lab Sample ID: 890-636-5

Date Collected: 05/03/21 12:00

Matrix: Solid

Date Received: 05/06/21 10:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/07/21 01:10	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 00:44	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 15:09	SC	XM

Client Sample ID: FS06

Lab Sample ID: 890-636-6

Date Collected: 05/03/21 12:30

Matrix: Solid

Date Received: 05/06/21 10:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/07/21 01:30	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 01:05	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 15:15	SC	XM

Client Sample ID: FS07

Lab Sample ID: 890-636-7

Date Collected: 05/03/21 12:45

Matrix: Solid

Date Received: 05/06/21 10:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/07/21 01:51	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 01:26	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 15:20	SC	XM

Client Sample ID: FS08

Lab Sample ID: 890-636-8

Date Collected: 05/03/21 13:00

Matrix: Solid

Date Received: 05/06/21 10:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/07/21 02:11	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 01:47	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 15:26	SC	XM

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS09

Lab Sample ID: 890-636-9

Date Collected: 05/03/21 13:20

Matrix: Solid

Date Received: 05/06/21 10:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/07/21 03:33	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 02:08	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 15:42	SC	XM

Client Sample ID: FS10

Lab Sample ID: 890-636-10

Date Collected: 05/03/21 13:40

Matrix: Solid

Date Received: 05/06/21 10:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/07/21 03:53	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 02:28	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 15:47	SC	XM

Client Sample ID: FS11

Lab Sample ID: 890-636-11

Date Collected: 05/03/21 14:00

Matrix: Solid

Date Received: 05/06/21 10:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/07/21 04:14	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 03:10	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 16:03	SC	XM

Client Sample ID: FS12

Lab Sample ID: 890-636-12

Date Collected: 05/03/21 14:15

Matrix: Solid

Date Received: 05/06/21 10:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/07/21 04:34	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 03:31	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 16:09	SC	XM

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS13

Date Collected: 05/03/21 14:35

Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-13

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/07/21 04:55	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 03:52	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 16:14	SC	XM

Client Sample ID: FS14

Date Collected: 05/03/21 14:50

Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-14

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/07/21 05:15	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 04:12	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 16:19	SC	XM

Client Sample ID: FS15

Date Collected: 05/03/21 15:10

Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-15

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/07/21 05:35	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 04:33	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 16:25	SC	XM

Client Sample ID: FS16

Date Collected: 05/03/21 15:30

Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-16

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/07/21 05:56	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 04:54	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 16:30	SC	XM

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS17**Lab Sample ID: 890-636-17****Date Collected: 05/03/21 15:45****Matrix: Solid****Date Received: 05/06/21 10:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/07/21 06:16	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 05:14	AJ	XM
Soluble	Leach	DI Leach			2809	05/07/21 09:31	CH	XM
Soluble	Analysis	300.0		1	2819	05/07/21 16:36	SC	XM

Client Sample ID: FS18**Lab Sample ID: 890-636-18****Date Collected: 05/03/21 16:00****Matrix: Solid****Date Received: 05/06/21 10:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2765	05/06/21 15:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/07/21 06:37	KL	XM
Total/NA	Prep	8015NM Prep			2790	05/06/21 16:20	DM	XM
Total/NA	Analysis	8015B NM		1	2804	05/07/21 05:35	AJ	XM
Soluble	Leach	DI Leach			2803	05/06/21 17:18	SC	XM
Soluble	Analysis	300.0		1	2806	05/07/21 11:19	CH	XM

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-636-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-636-1
SDG: TE012919259

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-636-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-636-1	FS01	Solid	05/03/21 11:00	05/06/21 10:50	- 1
890-636-2	FS02	Solid	05/03/21 11:20	05/06/21 10:50	- 1
890-636-3	FS03	Solid	05/03/21 11:30	05/06/21 10:50	- 1
890-636-4	FS04	Solid	05/03/21 11:45	05/06/21 10:50	- 1
890-636-5	FS05	Solid	05/03/21 12:00	05/06/21 10:50	- 1
890-636-6	FS06	Solid	05/03/21 12:30	05/06/21 10:50	- 1
890-636-7	FS07	Solid	05/03/21 12:45	05/06/21 10:50	- 1
890-636-8	FS08	Solid	05/03/21 13:00	05/06/21 10:50	- 1
890-636-9	FS09	Solid	05/03/21 13:20	05/06/21 10:50	- 1
890-636-10	FS10	Solid	05/03/21 13:40	05/06/21 10:50	- 1
890-636-11	FS11	Solid	05/03/21 14:00	05/06/21 10:50	- 1
890-636-12	FS12	Solid	05/03/21 14:15	05/06/21 10:50	- 1
890-636-13	FS13	Solid	05/03/21 14:35	05/06/21 10:50	- 1
890-636-14	FS14	Solid	05/03/21 14:50	05/06/21 10:50	- 4.5
890-636-15	FS15	Solid	05/03/21 15:10	05/06/21 10:50	- 4.5
890-636-16	FS16	Solid	05/03/21 15:30	05/06/21 10:50	- 4.5
890-636-17	FS17	Solid	05/03/21 15:45	05/06/21 10:50	- 4.5
890-636-18	FS18	Solid	05/03/21 16:00	05/06/21 10:50	- 4.5

Eurofins Xenco, Carlsbad



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

Chain of Custody

Work Order No: _____

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	bbell@ltenv.com

Project Name:	TRU OET	Turn Around	<input type="checkbox"/>
Project Number:	TE012919259	Routine	<input type="checkbox"/>
P.O. Number:	28R-4625	Rush:	ZYHRA
Sampler's Name:	Benjamin Belli	Due Date:	

Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	70.08	Page Thermometer ID	
Received In tact:	Yes No	Correction Factor:	
Cooler Custody Seals:	Yes No	Total Containers:	
Sample Custody Seals:	Yes No		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers		
					TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)
FS11	S	5/3/21	1400	1'	✓	✓	✓
FS12			1415	1'	✓	✓	✓
FS13			1435	1'	✓	✓	✓
FS14			1450	4.5'	✓	✓	✓
FS15			1510	4.5'	✓	✓	✓
FS16			1530	4.5'	✓	✓	✓
FS17			1545	4.5'	✓	✓	✓
FS18			1600	4.5'	✓	✓	✓

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	5/13/21 @ 1445	<i>[Signature]</i>	<i>[Signature]</i>	
		5/6/21 / 10:50			

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-636-1
SDG Number: TE012919259

Login Number: 636
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-636-1
SDG Number: TE012919259

Login Number: 636
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 05/06/21 03:51 PM

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

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-645-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI 1

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

Attn: Dan Moir

Authorized for release by:
5/10/2021 8:11:01 PM

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



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

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

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Client: WSP USA Inc.
Project/Site: JRU DI 1

Laboratory Job ID: 890-645-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-645-1
SDG: TE012919259

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high 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
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-645-1
SDG: TE012919259

Job ID: 890-645-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-645-1

Receipt

The samples were received on 5/7/2021 10:47 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 5.4°C

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: FS12 (890-645-1), FS13 (890-645-2), FS14 (890-645-3), FS15 (890-645-4), FS16 (890-645-5) and SW10 (890-645-6).

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.

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Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-645-1
SDG: TE012919259

Client Sample ID: FS12

Lab Sample ID: 890-645-1

Date Collected: 05/06/21 11:00

Matrix: Solid

Date Received: 05/07/21 10:47

Sample Depth: 1 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/10/21 09:37	05/10/21 13:47	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/10/21 09:37	05/10/21 13:47	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/10/21 09:37	05/10/21 13:47	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		05/10/21 09:37	05/10/21 13:47	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/10/21 09:37	05/10/21 13:47	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		05/10/21 09:37	05/10/21 13:47	1
Total BTEX	<0.00404	U	0.00404	mg/Kg		05/10/21 09:37	05/10/21 13:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	05/10/21 09:37	05/10/21 13:47	1
1,4-Difluorobenzene (Surr)	116		70 - 130	05/10/21 09:37	05/10/21 13:47	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/10/21 10:45	05/10/21 13:53	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/10/21 10:45	05/10/21 13:53	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/10/21 10:45	05/10/21 13:53	1
Total TPH	<49.8	U	49.8	mg/Kg		05/10/21 10:45	05/10/21 13:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	132	S1+	70 - 130	05/10/21 10:45	05/10/21 13:53	1
o-Terphenyl	137	S1+	70 - 130	05/10/21 10:45	05/10/21 13:53	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	185		4.99	mg/Kg			05/10/21 17:18	1

Client Sample ID: FS13

Lab Sample ID: 890-645-2

Date Collected: 05/06/21 11:45

Matrix: Solid

Date Received: 05/07/21 10:47

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/10/21 09:37	05/10/21 14:08	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/10/21 09:37	05/10/21 14:08	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/10/21 09:37	05/10/21 14:08	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/10/21 09:37	05/10/21 14:08	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/10/21 09:37	05/10/21 14:08	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/10/21 09:37	05/10/21 14:08	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/10/21 09:37	05/10/21 14:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130	05/10/21 09:37	05/10/21 14:08	1
1,4-Difluorobenzene (Surr)	105		70 - 130	05/10/21 09:37	05/10/21 14:08	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-645-1
SDG: TE012919259

Client Sample ID: FS13

Lab Sample ID: 890-645-2

Date Collected: 05/06/21 11:45

Matrix: Solid

Date Received: 05/07/21 10:47

Sample Depth: - 4

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/10/21 10:45	05/10/21 14:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/10/21 10:45	05/10/21 14:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/10/21 10:45	05/10/21 14:55	1
Total TPH	<50.0	U	50.0	mg/Kg		05/10/21 10:45	05/10/21 14:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130	05/10/21 10:45	05/10/21 14:55	1
o-Terphenyl	107		70 - 130	05/10/21 10:45	05/10/21 14:55	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	191		4.96	mg/Kg			05/10/21 17:23	1

Client Sample ID: FS14

Lab Sample ID: 890-645-3

Date Collected: 05/06/21 12:30

Matrix: Solid

Date Received: 05/07/21 10:47

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/10/21 09:37	05/10/21 14:29	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/10/21 09:37	05/10/21 14:29	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/10/21 09:37	05/10/21 14:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/10/21 09:37	05/10/21 14:29	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/10/21 09:37	05/10/21 14:29	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/10/21 09:37	05/10/21 14:29	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/10/21 09:37	05/10/21 14:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	05/10/21 09:37	05/10/21 14:29	1
1,4-Difluorobenzene (Surr)	120		70 - 130	05/10/21 09:37	05/10/21 14:29	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/10/21 10:45	05/10/21 15:16	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/10/21 10:45	05/10/21 15:16	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/10/21 10:45	05/10/21 15:16	1
Total TPH	<49.8	U	49.8	mg/Kg		05/10/21 10:45	05/10/21 15:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130	05/10/21 10:45	05/10/21 15:16	1
o-Terphenyl	107		70 - 130	05/10/21 10:45	05/10/21 15:16	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	410		4.96	mg/Kg			05/10/21 17:28	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-645-1
SDG: TE012919259

Client Sample ID: FS15

Lab Sample ID: 890-645-4

Date Collected: 05/06/21 13:30

Matrix: Solid

Date Received: 05/07/21 10:47

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/10/21 09:37	05/10/21 14:49	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/10/21 09:37	05/10/21 14:49	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/10/21 09:37	05/10/21 14:49	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/10/21 09:37	05/10/21 14:49	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/10/21 09:37	05/10/21 14:49	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/10/21 09:37	05/10/21 14:49	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/10/21 09:37	05/10/21 14:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130	05/10/21 09:37	05/10/21 14:49	1
1,4-Difluorobenzene (Surr)	103		70 - 130	05/10/21 09:37	05/10/21 14:49	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/10/21 10:45	05/10/21 15:36	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/10/21 10:45	05/10/21 15:36	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/10/21 10:45	05/10/21 15:36	1
Total TPH	<49.8	U	49.8	mg/Kg		05/10/21 10:45	05/10/21 15:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	05/10/21 10:45	05/10/21 15:36	1
o-Terphenyl	114		70 - 130	05/10/21 10:45	05/10/21 15:36	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21.7		4.99	mg/Kg			05/10/21 17:33	1

Client Sample ID: FS16

Lab Sample ID: 890-645-5

Date Collected: 05/06/21 14:30

Matrix: Solid

Date Received: 05/07/21 10:47

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/10/21 09:37	05/10/21 15:10	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/10/21 09:37	05/10/21 15:10	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/10/21 09:37	05/10/21 15:10	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/10/21 09:37	05/10/21 15:10	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/10/21 09:37	05/10/21 15:10	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/10/21 09:37	05/10/21 15:10	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/10/21 09:37	05/10/21 15:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130	05/10/21 09:37	05/10/21 15:10	1
1,4-Difluorobenzene (Surr)	70		70 - 130	05/10/21 09:37	05/10/21 15:10	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-645-1
SDG: TE012919259

Client Sample ID: FS16

Lab Sample ID: 890-645-5

Date Collected: 05/06/21 14:30

Matrix: Solid

Date Received: 05/07/21 10:47

Sample Depth: - 1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7	mg/Kg		05/10/21 10:45	05/10/21 15:57	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7	mg/Kg		05/10/21 10:45	05/10/21 15:57	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		05/10/21 10:45	05/10/21 15:57	1
Total TPH	<49.7	U	49.7	mg/Kg		05/10/21 10:45	05/10/21 15:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	05/10/21 10:45	05/10/21 15:57	1
o-Terphenyl	111		70 - 130	05/10/21 10:45	05/10/21 15:57	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34.0		5.05	mg/Kg			05/10/21 17:38	1

Client Sample ID: SW10

Lab Sample ID: 890-645-6

Date Collected: 05/06/21 15:15

Matrix: Solid

Date Received: 05/07/21 10:47

Sample Depth: 1 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/10/21 09:37	05/10/21 15:31	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/10/21 09:37	05/10/21 15:31	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/10/21 09:37	05/10/21 15:31	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		05/10/21 09:37	05/10/21 15:31	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/10/21 09:37	05/10/21 15:31	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		05/10/21 09:37	05/10/21 15:31	1
Total BTEX	<0.00401	U	0.00401	mg/Kg		05/10/21 09:37	05/10/21 15:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130	05/10/21 09:37	05/10/21 15:31	1
1,4-Difluorobenzene (Surr)	109		70 - 130	05/10/21 09:37	05/10/21 15:31	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/10/21 10:45	05/10/21 16:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/10/21 10:45	05/10/21 16:18	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/10/21 10:45	05/10/21 16:18	1
Total TPH	<50.0	U	50.0	mg/Kg		05/10/21 10:45	05/10/21 16:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130	05/10/21 10:45	05/10/21 16:18	1
o-Terphenyl	109		70 - 130	05/10/21 10:45	05/10/21 16:18	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.22		5.03	mg/Kg			05/10/21 17:43	1

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-645-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-645-1	FS12	101	116
890-645-2	FS13	94	105
890-645-3	FS14	97	120
890-645-4	FS15	117	103
890-645-5	FS16	123	70
890-645-6	SW10	90	109
LCS 880-2889/1-A	Lab Control Sample	91	104
LCSD 880-2889/2-A	Lab Control Sample Dup	95	110
MB 880-2889/5-A	Method Blank	122	109

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-645-1	FS12	132 S1+	137 S1+
890-645-1 MS	FS12	116	111
890-645-1 MSD	FS12	112	111
890-645-2	FS13	104	107
890-645-3	FS14	104	107
890-645-4	FS15	106	114
890-645-5	FS16	107	111
890-645-6	SW10	105	109
LCS 880-2896/2-A	Lab Control Sample	115	110
LCSD 880-2896/3-A	Lab Control Sample Dup	111	109
MB 880-2896/1-A	Method Blank	115	119

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-645-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2889/5-A
Matrix: Solid
Analysis Batch: 2891

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2889

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/10/21 09:37	05/10/21 13:05	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/10/21 09:37	05/10/21 13:05	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/10/21 09:37	05/10/21 13:05	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/10/21 09:37	05/10/21 13:05	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/10/21 09:37	05/10/21 13:05	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/10/21 09:37	05/10/21 13:05	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/10/21 09:37	05/10/21 13:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		70 - 130	05/10/21 09:37	05/10/21 13:05	1
1,4-Difluorobenzene (Surr)	109		70 - 130	05/10/21 09:37	05/10/21 13:05	1

Lab Sample ID: LCS 880-2889/1-A
Matrix: Solid
Analysis Batch: 2891

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2889

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09080		mg/Kg		91	70 - 130
Toluene	0.100	0.09831		mg/Kg		98	70 - 130
Ethylbenzene	0.100	0.09750		mg/Kg		97	70 - 130
m-Xylene & p-Xylene	0.200	0.2004		mg/Kg		100	70 - 130
o-Xylene	0.100	0.09628		mg/Kg		96	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	91		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: LCSD 880-2889/2-A
Matrix: Solid
Analysis Batch: 2891

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2889

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.100	0.09412		mg/Kg		94	70 - 130	4	35
Toluene	0.100	0.1029		mg/Kg		103	70 - 130	5	35
Ethylbenzene	0.100	0.1005		mg/Kg		100	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.2013		mg/Kg		101	70 - 130	0	35
o-Xylene	0.100	0.09519		mg/Kg		95	70 - 130	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-645-1
SDG: TE012919259

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

Lab Sample ID: MB 880-2896/1-A
Matrix: Solid
Analysis Batch: 2879

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2896

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/10/21 10:45	05/10/21 12:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/10/21 10:45	05/10/21 12:51	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/10/21 10:45	05/10/21 12:51	1
Total TPH	<50.0	U	50.0	mg/Kg		05/10/21 10:45	05/10/21 12:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130	05/10/21 10:45	05/10/21 12:51	1
o-Terphenyl	119		70 - 130	05/10/21 10:45	05/10/21 12:51	1

Lab Sample ID: LCS 880-2896/2-A
Matrix: Solid
Analysis Batch: 2879

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2896

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	967.1		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1159		mg/Kg		116	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	110		70 - 130

Lab Sample ID: LCSD 880-2896/3-A
Matrix: Solid
Analysis Batch: 2879

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2896

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	938.1		mg/Kg		94	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	1126		mg/Kg		113	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: 890-645-1 MS
Matrix: Solid
Analysis Batch: 2879

Client Sample ID: FS12
Prep Type: Total/NA
Prep Batch: 2896

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	999	976.3		mg/Kg		98	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U	999	1217		mg/Kg		122	70 - 130

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-645-1
SDG: TE012919259

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

Lab Sample ID: 890-645-1 MS
Matrix: Solid
Analysis Batch: 2879

Client Sample ID: FS12
Prep Type: Total/NA
Prep Batch: 2896

Surrogate	%Recovery	MS MS Qualifier	Limits
1-Chlorooctane	116		70 - 130
o-Terphenyl	111		70 - 130

Lab Sample ID: 890-645-1 MSD
Matrix: Solid
Analysis Batch: 2879

Client Sample ID: FS12
Prep Type: Total/NA
Prep Batch: 2896

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	
				Result	Qualifier				Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	998	948.0		mg/Kg		95	70 - 130	3	20	
Diesel Range Organics (Over C10-C28)	<49.8	U	998	1199		mg/Kg		120	70 - 130	2	20	

Surrogate	%Recovery	MSD MSD Qualifier	Limits
1-Chlorooctane	112		70 - 130
o-Terphenyl	111		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2873/1-A
Matrix: Solid
Analysis Batch: 2921

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/10/21 14:20	1

Lab Sample ID: LCS 880-2873/2-A
Matrix: Solid
Analysis Batch: 2921

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	240.7		mg/Kg		96	90 - 110

Lab Sample ID: LCSD 880-2873/3-A
Matrix: Solid
Analysis Batch: 2921

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	250	245.3		mg/Kg		98	90 - 110	2	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-645-1
SDG: TE012919259

GC VOA

Prep Batch: 2889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-645-1	FS12	Total/NA	Solid	5035	
890-645-2	FS13	Total/NA	Solid	5035	
890-645-3	FS14	Total/NA	Solid	5035	
890-645-4	FS15	Total/NA	Solid	5035	
890-645-5	FS16	Total/NA	Solid	5035	
890-645-6	SW10	Total/NA	Solid	5035	
MB 880-2889/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2889/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2889/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 2891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-645-1	FS12	Total/NA	Solid	8021B	2889
890-645-2	FS13	Total/NA	Solid	8021B	2889
890-645-3	FS14	Total/NA	Solid	8021B	2889
890-645-4	FS15	Total/NA	Solid	8021B	2889
890-645-5	FS16	Total/NA	Solid	8021B	2889
890-645-6	SW10	Total/NA	Solid	8021B	2889
MB 880-2889/5-A	Method Blank	Total/NA	Solid	8021B	2889
LCS 880-2889/1-A	Lab Control Sample	Total/NA	Solid	8021B	2889
LCSD 880-2889/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2889

GC Semi VOA

Analysis Batch: 2879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-645-1	FS12	Total/NA	Solid	8015B NM	2896
890-645-2	FS13	Total/NA	Solid	8015B NM	2896
890-645-3	FS14	Total/NA	Solid	8015B NM	2896
890-645-4	FS15	Total/NA	Solid	8015B NM	2896
890-645-5	FS16	Total/NA	Solid	8015B NM	2896
890-645-6	SW10	Total/NA	Solid	8015B NM	2896
MB 880-2896/1-A	Method Blank	Total/NA	Solid	8015B NM	2896
LCS 880-2896/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2896
LCSD 880-2896/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2896
890-645-1 MS	FS12	Total/NA	Solid	8015B NM	2896
890-645-1 MSD	FS12	Total/NA	Solid	8015B NM	2896

Prep Batch: 2896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-645-1	FS12	Total/NA	Solid	8015NM Prep	
890-645-2	FS13	Total/NA	Solid	8015NM Prep	
890-645-3	FS14	Total/NA	Solid	8015NM Prep	
890-645-4	FS15	Total/NA	Solid	8015NM Prep	
890-645-5	FS16	Total/NA	Solid	8015NM Prep	
890-645-6	SW10	Total/NA	Solid	8015NM Prep	
MB 880-2896/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2896/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2896/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-645-1 MS	FS12	Total/NA	Solid	8015NM Prep	
890-645-1 MSD	FS12	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-645-1
SDG: TE012919259

HPLC/IC

Leach Batch: 2873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-645-1	FS12	Soluble	Solid	DI Leach	
890-645-2	FS13	Soluble	Solid	DI Leach	
890-645-3	FS14	Soluble	Solid	DI Leach	
890-645-4	FS15	Soluble	Solid	DI Leach	
890-645-5	FS16	Soluble	Solid	DI Leach	
890-645-6	SW10	Soluble	Solid	DI Leach	
MB 880-2873/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2873/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2873/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 2921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-645-1	FS12	Soluble	Solid	300.0	2873
890-645-2	FS13	Soluble	Solid	300.0	2873
890-645-3	FS14	Soluble	Solid	300.0	2873
890-645-4	FS15	Soluble	Solid	300.0	2873
890-645-5	FS16	Soluble	Solid	300.0	2873
890-645-6	SW10	Soluble	Solid	300.0	2873
MB 880-2873/1-A	Method Blank	Soluble	Solid	300.0	2873
LCS 880-2873/2-A	Lab Control Sample	Soluble	Solid	300.0	2873
LCSD 880-2873/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2873

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-645-1
SDG: TE012919259

Client Sample ID: FS12

Lab Sample ID: 890-645-1

Date Collected: 05/06/21 11:00

Matrix: Solid

Date Received: 05/07/21 10:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2889	05/10/21 09:37	KL	XM
Total/NA	Analysis	8021B		1	2891	05/10/21 13:47	KL	XM
Total/NA	Prep	8015NM Prep			2896	05/10/21 10:45	AM	XM
Total/NA	Analysis	8015B NM		1	2879	05/10/21 13:53	AJ	XM
Soluble	Leach	DI Leach			2873	05/08/21 13:31	SC	XM
Soluble	Analysis	300.0		1	2921	05/10/21 17:18	CH	XM

Client Sample ID: FS13

Lab Sample ID: 890-645-2

Date Collected: 05/06/21 11:45

Matrix: Solid

Date Received: 05/07/21 10:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2889	05/10/21 09:37	KL	XM
Total/NA	Analysis	8021B		1	2891	05/10/21 14:08	KL	XM
Total/NA	Prep	8015NM Prep			2896	05/10/21 10:45	AM	XM
Total/NA	Analysis	8015B NM		1	2879	05/10/21 14:55	AJ	XM
Soluble	Leach	DI Leach			2873	05/08/21 13:31	SC	XM
Soluble	Analysis	300.0		1	2921	05/10/21 17:23	CH	XM

Client Sample ID: FS14

Lab Sample ID: 890-645-3

Date Collected: 05/06/21 12:30

Matrix: Solid

Date Received: 05/07/21 10:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2889	05/10/21 09:37	KL	XM
Total/NA	Analysis	8021B		1	2891	05/10/21 14:29	KL	XM
Total/NA	Prep	8015NM Prep			2896	05/10/21 10:45	AM	XM
Total/NA	Analysis	8015B NM		1	2879	05/10/21 15:16	AJ	XM
Soluble	Leach	DI Leach			2873	05/08/21 13:31	SC	XM
Soluble	Analysis	300.0		1	2921	05/10/21 17:28	CH	XM

Client Sample ID: FS15

Lab Sample ID: 890-645-4

Date Collected: 05/06/21 13:30

Matrix: Solid

Date Received: 05/07/21 10:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2889	05/10/21 09:37	KL	XM
Total/NA	Analysis	8021B		1	2891	05/10/21 14:49	KL	XM
Total/NA	Prep	8015NM Prep			2896	05/10/21 10:45	AM	XM
Total/NA	Analysis	8015B NM		1	2879	05/10/21 15:36	AJ	XM
Soluble	Leach	DI Leach			2873	05/08/21 13:31	SC	XM
Soluble	Analysis	300.0		1	2921	05/10/21 17:33	CH	XM

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-645-1
SDG: TE012919259

Client Sample ID: FS16

Lab Sample ID: 890-645-5

Date Collected: 05/06/21 14:30

Matrix: Solid

Date Received: 05/07/21 10:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2889	05/10/21 09:37	KL	XM
Total/NA	Analysis	8021B		1	2891	05/10/21 15:10	KL	XM
Total/NA	Prep	8015NM Prep			2896	05/10/21 10:45	AM	XM
Total/NA	Analysis	8015B NM		1	2879	05/10/21 15:57	AJ	XM
Soluble	Leach	DI Leach			2873	05/08/21 13:31	SC	XM
Soluble	Analysis	300.0		1	2921	05/10/21 17:38	CH	XM

Client Sample ID: SW10

Lab Sample ID: 890-645-6

Date Collected: 05/06/21 15:15

Matrix: Solid

Date Received: 05/07/21 10:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2889	05/10/21 09:37	KL	XM
Total/NA	Analysis	8021B		1	2891	05/10/21 15:31	KL	XM
Total/NA	Prep	8015NM Prep			2896	05/10/21 10:45	AM	XM
Total/NA	Analysis	8015B NM		1	2879	05/10/21 16:18	AJ	XM
Soluble	Leach	DI Leach			2873	05/08/21 13:31	SC	XM
Soluble	Analysis	300.0		1	2921	05/10/21 17:43	CH	XM

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-645-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-645-1
SDG: TE012919259

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

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



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-645-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-645-1	FS12	Solid	05/06/21 11:00	05/07/21 10:47	1 - 4
890-645-2	FS13	Solid	05/06/21 11:45	05/07/21 10:47	- 4
890-645-3	FS14	Solid	05/06/21 12:30	05/07/21 10:47	- 4
890-645-4	FS15	Solid	05/06/21 13:30	05/07/21 10:47	- 1
890-645-5	FS16	Solid	05/06/21 14:30	05/07/21 10:47	- 1
890-645-6	SW10	Solid	05/06/21 15:15	05/07/21 10:47	1 - 4

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

Chain of Custody

Work Order No: _____

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Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	bbellill@lteny.com

Program: <input type="checkbox"/> UST/PST <input type="checkbox"/> DRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/> State of Project:
Reporting Level: <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> ST/UST <input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/> Deliverables: <input type="checkbox"/> EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:

Project Name:	SRD OIT	Turn Around	<input type="checkbox"/>
Project Number:	TE012419254	Routine	<input type="checkbox"/>
P.O. Number:	NRM2002747253	Rush:	2/1/HH
Sampler's Name:	Benjamin Bellill	Due Date:	

SAMPLE RECEIPT	Temp Blank:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Wet Ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Temperature (°C):	5.8	Thermometer ID		
Received In tact:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Correction Factor:	5.4	
Cooler Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Total Containers:		
Sample Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers			Sample Comments
					TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	
FS12	S	5/16/21	1100	1'-4"	1	1	1	
FS13	S	5/16/21	1145	4'	1	1	1	
FS14	S	5/16/21	1730	4'	1	1	1	
FS15	S	5/16/21	1330	1'	1	1	1	
FS16	S	5/16/21	1430	1'	1	1	1	
SW10	S	5/16/21	1515	0-4"	1	1	1	



890-645 Chain of Custody

ANALYSIS REQUEST	Work Order Notes
	AFEW2021.01559ED.01
	1082151001
	1st Center
	TAT starts the day received by the lab, if received by 4:30pm

Total 2007 / 6010 2008 / 6020: 8RCRA 13PBM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
 1631 / 245.1 / 7470. / 7474. / Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	5/17/21 1038	<i>[Signature]</i>	<i>[Signature]</i>	5/17/21 10:47

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-645-1
SDG Number: TE012919259

Login Number: 645

List Number: 1

Creator: Ordonez, Gabby

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-645-1
SDG Number: TE012919259

Login Number: 645
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 05/10/21 10:48 AM

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

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Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-646-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI 1

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

Attn: Dan Moir

Authorized for release by:
5/10/2021 8:29:00 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com



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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: WSP USA Inc.
Project/Site: JRU DI 1

Laboratory Job ID: 890-646-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-646-1
SDG: TE012919259

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-646-1
SDG: TE012919259

Job ID: 890-646-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-646-1

Comments

No additional comments.

Receipt

The samples were received on 5/7/2021 10:47 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 was 5.4° C.

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: SW01 (890-646-1), SW02 (890-646-2), SW03 (890-646-3), FS19 (890-646-4), FS20 (890-646-5) and FS21 (890-646-6).

GC VOA

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-2886 and analytical batch 880-2884 Benzene were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Internal standard responses were outside of acceptance limits for the following sample: SW02 (890-646-2). The sample(s) shows evidence of matrix interference.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-646-1
SDG: TE012919259

Client Sample ID: SW01

Lab Sample ID: 890-646-1

Date Collected: 05/05/21 14:10

Matrix: Solid

Date Received: 05/07/21 10:47

Sample Depth: 0 - 4.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U F2 F1	0.00200	mg/Kg		05/10/21 10:50	05/10/21 15:04	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/10/21 10:50	05/10/21 15:04	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/10/21 10:50	05/10/21 15:04	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/10/21 10:50	05/10/21 15:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/10/21 10:50	05/10/21 15:04	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/10/21 10:50	05/10/21 15:04	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/10/21 10:50	05/10/21 15:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	05/10/21 10:50	05/10/21 15:04	1
1,4-Difluorobenzene (Surr)	100		70 - 130	05/10/21 10:50	05/10/21 15:04	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/10/21 11:09	05/10/21 14:34	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/10/21 11:09	05/10/21 14:34	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/10/21 11:09	05/10/21 14:34	1
Total TPH	<49.8	U	49.8	mg/Kg		05/10/21 11:09	05/10/21 14:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	05/10/21 11:09	05/10/21 14:34	1
o-Terphenyl	121		70 - 130	05/10/21 11:09	05/10/21 14:34	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	101		5.02	mg/Kg			05/10/21 15:43	1

Client Sample ID: SW02

Lab Sample ID: 890-646-2

Date Collected: 05/05/21 14:25

Matrix: Solid

Date Received: 05/07/21 10:47

Sample Depth: 0 - 4.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/10/21 10:50	05/10/21 15:25	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/10/21 10:50	05/10/21 15:25	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/10/21 10:50	05/10/21 15:25	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/10/21 10:50	05/10/21 15:25	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/10/21 10:50	05/10/21 15:25	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/10/21 10:50	05/10/21 15:25	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/10/21 10:50	05/10/21 15:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130	05/10/21 10:50	05/10/21 15:25	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/10/21 10:50	05/10/21 15:25	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-646-1
SDG: TE012919259

Client Sample ID: SW02

Lab Sample ID: 890-646-2

Date Collected: 05/05/21 14:25

Matrix: Solid

Date Received: 05/07/21 10:47

Sample Depth: 0 - 4.5

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/10/21 11:09	05/10/21 14:55	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/10/21 11:09	05/10/21 14:55	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/10/21 11:09	05/10/21 14:55	1
Total TPH	<49.9	U	49.9	mg/Kg		05/10/21 11:09	05/10/21 14:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130	05/10/21 11:09	05/10/21 14:55	1
o-Terphenyl	124		70 - 130	05/10/21 11:09	05/10/21 14:55	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34.2		5.00	mg/Kg			05/10/21 15:47	1

Client Sample ID: SW03

Lab Sample ID: 890-646-3

Date Collected: 05/05/21 14:30

Matrix: Solid

Date Received: 05/07/21 10:47

Sample Depth: 0 - 4.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/10/21 10:50	05/10/21 15:45	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/10/21 10:50	05/10/21 15:45	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/10/21 10:50	05/10/21 15:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/10/21 10:50	05/10/21 15:45	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/10/21 10:50	05/10/21 15:45	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/10/21 10:50	05/10/21 15:45	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/10/21 10:50	05/10/21 15:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	05/10/21 10:50	05/10/21 15:45	1
1,4-Difluorobenzene (Surr)	103		70 - 130	05/10/21 10:50	05/10/21 15:45	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/10/21 11:09	05/10/21 15:16	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/10/21 11:09	05/10/21 15:16	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/10/21 11:09	05/10/21 15:16	1
Total TPH	<49.8	U	49.8	mg/Kg		05/10/21 11:09	05/10/21 15:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	05/10/21 11:09	05/10/21 15:16	1
o-Terphenyl	124		70 - 130	05/10/21 11:09	05/10/21 15:16	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	83.2		4.98	mg/Kg			05/10/21 15:53	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-646-1
SDG: TE012919259

Client Sample ID: FS19

Lab Sample ID: 890-646-4

Date Collected: 05/05/21 14:35

Matrix: Solid

Date Received: 05/07/21 10:47

Sample Depth: - 4.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/10/21 10:50	05/10/21 16:06	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/10/21 10:50	05/10/21 16:06	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/10/21 10:50	05/10/21 16:06	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/10/21 10:50	05/10/21 16:06	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/10/21 10:50	05/10/21 16:06	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/10/21 10:50	05/10/21 16:06	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/10/21 10:50	05/10/21 16:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	05/10/21 10:50	05/10/21 16:06	1
1,4-Difluorobenzene (Surr)	100		70 - 130	05/10/21 10:50	05/10/21 16:06	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/10/21 11:09	05/10/21 15:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/10/21 11:09	05/10/21 15:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/10/21 11:09	05/10/21 15:36	1
Total TPH	<50.0	U	50.0	mg/Kg		05/10/21 11:09	05/10/21 15:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	05/10/21 11:09	05/10/21 15:36	1
o-Terphenyl	121		70 - 130	05/10/21 11:09	05/10/21 15:36	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.81		4.95	mg/Kg			05/10/21 15:58	1

Client Sample ID: FS20

Lab Sample ID: 890-646-5

Date Collected: 05/05/21 15:00

Matrix: Solid

Date Received: 05/07/21 10:47

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/10/21 10:50	05/10/21 16:26	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/10/21 10:50	05/10/21 16:26	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/10/21 10:50	05/10/21 16:26	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		05/10/21 10:50	05/10/21 16:26	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/10/21 10:50	05/10/21 16:26	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		05/10/21 10:50	05/10/21 16:26	1
Total BTEX	<0.00397	U	0.00397	mg/Kg		05/10/21 10:50	05/10/21 16:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130	05/10/21 10:50	05/10/21 16:26	1
1,4-Difluorobenzene (Surr)	101		70 - 130	05/10/21 10:50	05/10/21 16:26	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-646-1
SDG: TE012919259

Client Sample ID: FS20

Lab Sample ID: 890-646-5

Date Collected: 05/05/21 15:00

Matrix: Solid

Date Received: 05/07/21 10:47

Sample Depth: - 1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/10/21 11:09	05/10/21 15:57	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/10/21 11:09	05/10/21 15:57	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/10/21 11:09	05/10/21 15:57	1
Total TPH	<49.9	U	49.9	mg/Kg		05/10/21 11:09	05/10/21 15:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130	05/10/21 11:09	05/10/21 15:57	1
o-Terphenyl	125		70 - 130	05/10/21 11:09	05/10/21 15:57	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.9		5.01	mg/Kg			05/10/21 16:13	1

Client Sample ID: FS21

Lab Sample ID: 890-646-6

Date Collected: 05/05/21 15:10

Matrix: Solid

Date Received: 05/07/21 10:47

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/10/21 10:50	05/10/21 16:46	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/10/21 10:50	05/10/21 16:46	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/10/21 10:50	05/10/21 16:46	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		05/10/21 10:50	05/10/21 16:46	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/10/21 10:50	05/10/21 16:46	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		05/10/21 10:50	05/10/21 16:46	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		05/10/21 10:50	05/10/21 16:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	05/10/21 10:50	05/10/21 16:46	1
1,4-Difluorobenzene (Surr)	101		70 - 130	05/10/21 10:50	05/10/21 16:46	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/10/21 11:09	05/10/21 16:18	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/10/21 11:09	05/10/21 16:18	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/10/21 11:09	05/10/21 16:18	1
Total TPH	<49.9	U	49.9	mg/Kg		05/10/21 11:09	05/10/21 16:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	05/10/21 11:09	05/10/21 16:18	1
o-Terphenyl	118		70 - 130	05/10/21 11:09	05/10/21 16:18	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.07		5.04	mg/Kg			05/10/21 16:18	1

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-646-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-646-1	SW01	105	100
890-646-1 MS	SW01	104	100
890-646-1 MSD	SW01	128	88
890-646-2	SW02	123	98
890-646-3	SW03	113	103
890-646-4	FS19	112	100
890-646-5	FS20	110	101
890-646-6	FS21	107	101
LCS 880-2886/1-A	Lab Control Sample	101	99
LCSD 880-2886/2-A	Lab Control Sample Dup	100	98
MB 880-2886/5-A	Method Blank	106	94

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-646-1	SW01	103	121
890-646-1 MS	SW01	108	116
890-646-1 MSD	SW01	110	118
890-646-2	SW02	105	124
890-646-3	SW03	107	124
890-646-4	FS19	103	121
890-646-5	FS20	109	125
890-646-6	FS21	102	118
LCS 880-2900/2-A	Lab Control Sample	112	121
LCSD 880-2900/3-A	Lab Control Sample Dup	111	117
MB 880-2900/1-A	Method Blank	104	121

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-646-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2886/5-A
Matrix: Solid
Analysis Batch: 2884

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2886

Analyte	MB MB		RL	Unit	D	Prepared		Analyzed		Dil Fac
	Result	Qualifier								
Benzene	<0.00200	U	0.00200	mg/Kg		05/10/21 10:50	05/10/21 14:35			1
Toluene	<0.00200	U	0.00200	mg/Kg		05/10/21 10:50	05/10/21 14:35			1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/10/21 10:50	05/10/21 14:35			1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/10/21 10:50	05/10/21 14:35			1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/10/21 10:50	05/10/21 14:35			1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/10/21 10:50	05/10/21 14:35			1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/10/21 10:50	05/10/21 14:35			1

Surrogate	MB MB		Limits	Prepared		Analyzed		Dil Fac
	%Recovery	Qualifier						
4-Bromofluorobenzene (Surr)	106		70 - 130	05/10/21 10:50		05/10/21 14:35		1
1,4-Difluorobenzene (Surr)	94		70 - 130	05/10/21 10:50		05/10/21 14:35		1

Lab Sample ID: LCS 880-2886/1-A
Matrix: Solid
Analysis Batch: 2884

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2886

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits	
		Result	Qualifier					
Benzene	0.100	0.09209		mg/Kg		92	70 - 130	
Toluene	0.100	0.1036		mg/Kg		104	70 - 130	
Ethylbenzene	0.100	0.1065		mg/Kg		106	70 - 130	
m-Xylene & p-Xylene	0.200	0.2193		mg/Kg		110	70 - 130	
o-Xylene	0.100	0.1093		mg/Kg		109	70 - 130	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: LCSD 880-2886/2-A
Matrix: Solid
Analysis Batch: 2884

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2886

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec. Limits		RPD	
		Result	Qualifier						RPD	Limit
Benzene	0.100	0.09103		mg/Kg		91	70 - 130	1	35	
Toluene	0.100	0.1027		mg/Kg		103	70 - 130	1	35	
Ethylbenzene	0.100	0.1057		mg/Kg		106	70 - 130	1	35	
m-Xylene & p-Xylene	0.200	0.2183		mg/Kg		109	70 - 130	0	35	
o-Xylene	0.100	0.1093		mg/Kg		109	70 - 130	0	35	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: 890-646-1 MS
Matrix: Solid
Analysis Batch: 2884

Client Sample ID: SW01
Prep Type: Total/NA
Prep Batch: 2886

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits	
				Result	Qualifier					
Benzene	<0.00200	U F2 F1	0.0998	0.08838		mg/Kg		89	70 - 130	

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-646-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-646-1 MS
Matrix: Solid
Analysis Batch: 2884

Client Sample ID: SW01
Prep Type: Total/NA
Prep Batch: 2886

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	<0.00200	U	0.0998	0.09924		mg/Kg		99	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.1020		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.2105		mg/Kg		105	70 - 130
o-Xylene	<0.00200	U	0.0998	0.1056		mg/Kg		106	70 - 130
MS MS									
Surrogate	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	104		70 - 130						
1,4-Difluorobenzene (Surr)	100		70 - 130						

Lab Sample ID: 890-646-1 MSD
Matrix: Solid
Analysis Batch: 2884

Client Sample ID: SW01
Prep Type: Total/NA
Prep Batch: 2886

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	<0.00200	U F2 F1	0.100	0.06043	F2 F1	mg/Kg		60	70 - 130	38	35
Toluene	<0.00200	U	0.100	0.08548		mg/Kg		85	70 - 130	15	35
Ethylbenzene	<0.00200	U	0.100	0.09826		mg/Kg		98	70 - 130	4	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.2098		mg/Kg		105	70 - 130	0	35
o-Xylene	<0.00200	U	0.100	0.1066		mg/Kg		106	70 - 130	1	35
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	128		70 - 130								
1,4-Difluorobenzene (Surr)	88		70 - 130								

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-2900/1-A
Matrix: Solid
Analysis Batch: 2881

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2900

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/10/21 11:09	05/10/21 12:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/10/21 11:09	05/10/21 12:51	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/10/21 11:09	05/10/21 12:51	1
Total TPH	<50.0	U	50.0	mg/Kg		05/10/21 11:09	05/10/21 12:51	1
MB MB								
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
1-Chlorooctane	104		70 - 130	05/10/21 11:09	05/10/21 12:51	1		
o-Terphenyl	121		70 - 130	05/10/21 11:09	05/10/21 12:51	1		

Lab Sample ID: LCS 880-2900/2-A
Matrix: Solid
Analysis Batch: 2881

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2900

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	943.7		mg/Kg		94	70 - 130

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-646-1
SDG: TE012919259

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-2900/2-A
Matrix: Solid
Analysis Batch: 2881

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2900

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (Over C10-C28)	1000	1225		mg/Kg		122	70 - 130
Surrogate							
		LCS %Recovery	LCS Qualifier				Limits
1-Chlorooctane		112					70 - 130
o-Terphenyl		121					70 - 130

Lab Sample ID: LCSD 880-2900/3-A
Matrix: Solid
Analysis Batch: 2881

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2900

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	925.1		mg/Kg		93	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	1221		mg/Kg		122	70 - 130	0	20
Surrogate									
		LCSD %Recovery	LCSD Qualifier				Limits		
1-Chlorooctane		111					70 - 130		
o-Terphenyl		117					70 - 130		

Lab Sample ID: 890-646-1 MS
Matrix: Solid
Analysis Batch: 2881

Client Sample ID: SW01
Prep Type: Total/NA
Prep Batch: 2900

Surrogate	%Recovery	MS Qualifier	MS Qualifier	Limits
1-Chlorooctane	108			70 - 130
o-Terphenyl	116			70 - 130

Lab Sample ID: 890-646-1 MSD
Matrix: Solid
Analysis Batch: 2881

Client Sample ID: SW01
Prep Type: Total/NA
Prep Batch: 2900

Surrogate	%Recovery	MSD Qualifier	MSD Qualifier	Limits
1-Chlorooctane	110			70 - 130
o-Terphenyl	118			70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2873/1-A
Matrix: Solid
Analysis Batch: 2921

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/10/21 14:20	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-646-1
SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-2873/2-A
Matrix: Solid
Analysis Batch: 2921

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	240.7		mg/Kg		96	90 - 110

Lab Sample ID: LCSD 880-2873/3-A
Matrix: Solid
Analysis Batch: 2921

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	245.3		mg/Kg		98	90 - 110	2	20

Lab Sample ID: 890-646-4 MS
Matrix: Solid
Analysis Batch: 2921

Client Sample ID: FS19
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.81		248	245.7		mg/Kg		96	90 - 110

Lab Sample ID: 890-646-4 MSD
Matrix: Solid
Analysis Batch: 2921

Client Sample ID: FS19
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	7.81		248	246.0		mg/Kg		96	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-646-1
SDG: TE012919259

GC VOA

Analysis Batch: 2884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-646-1	SW01	Total/NA	Solid	8021B	2886
890-646-2	SW02	Total/NA	Solid	8021B	2886
890-646-3	SW03	Total/NA	Solid	8021B	2886
890-646-4	FS19	Total/NA	Solid	8021B	2886
890-646-5	FS20	Total/NA	Solid	8021B	2886
890-646-6	FS21	Total/NA	Solid	8021B	2886
MB 880-2886/5-A	Method Blank	Total/NA	Solid	8021B	2886
LCS 880-2886/1-A	Lab Control Sample	Total/NA	Solid	8021B	2886
LCSD 880-2886/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2886
890-646-1 MS	SW01	Total/NA	Solid	8021B	2886
890-646-1 MSD	SW01	Total/NA	Solid	8021B	2886

Prep Batch: 2886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-646-1	SW01	Total/NA	Solid	5035	
890-646-2	SW02	Total/NA	Solid	5035	
890-646-3	SW03	Total/NA	Solid	5035	
890-646-4	FS19	Total/NA	Solid	5035	
890-646-5	FS20	Total/NA	Solid	5035	
890-646-6	FS21	Total/NA	Solid	5035	
MB 880-2886/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2886/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2886/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-646-1 MS	SW01	Total/NA	Solid	5035	
890-646-1 MSD	SW01	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 2881

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-646-1	SW01	Total/NA	Solid	8015B NM	2900
890-646-2	SW02	Total/NA	Solid	8015B NM	2900
890-646-3	SW03	Total/NA	Solid	8015B NM	2900
890-646-4	FS19	Total/NA	Solid	8015B NM	2900
890-646-5	FS20	Total/NA	Solid	8015B NM	2900
890-646-6	FS21	Total/NA	Solid	8015B NM	2900
MB 880-2900/1-A	Method Blank	Total/NA	Solid	8015B NM	2900
LCS 880-2900/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2900
LCSD 880-2900/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2900
890-646-1 MS	SW01	Total/NA	Solid	8015B NM	2900
890-646-1 MSD	SW01	Total/NA	Solid	8015B NM	2900

Prep Batch: 2900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-646-1	SW01	Total/NA	Solid	8015NM Prep	
890-646-2	SW02	Total/NA	Solid	8015NM Prep	
890-646-3	SW03	Total/NA	Solid	8015NM Prep	
890-646-4	FS19	Total/NA	Solid	8015NM Prep	
890-646-5	FS20	Total/NA	Solid	8015NM Prep	
890-646-6	FS21	Total/NA	Solid	8015NM Prep	
MB 880-2900/1-A	Method Blank	Total/NA	Solid	8015NM Prep	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-646-1
SDG: TE012919259

GC Semi VOA (Continued)

Prep Batch: 2900 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-2900/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2900/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-646-1 MS	SW01	Total/NA	Solid	8015NM Prep	
890-646-1 MSD	SW01	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 2873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-646-1	SW01	Soluble	Solid	DI Leach	
890-646-2	SW02	Soluble	Solid	DI Leach	
890-646-3	SW03	Soluble	Solid	DI Leach	
890-646-4	FS19	Soluble	Solid	DI Leach	
890-646-5	FS20	Soluble	Solid	DI Leach	
890-646-6	FS21	Soluble	Solid	DI Leach	
MB 880-2873/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2873/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2873/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-646-4 MS	FS19	Soluble	Solid	DI Leach	
890-646-4 MSD	FS19	Soluble	Solid	DI Leach	

Analysis Batch: 2921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-646-1	SW01	Soluble	Solid	300.0	2873
890-646-2	SW02	Soluble	Solid	300.0	2873
890-646-3	SW03	Soluble	Solid	300.0	2873
890-646-4	FS19	Soluble	Solid	300.0	2873
890-646-5	FS20	Soluble	Solid	300.0	2873
890-646-6	FS21	Soluble	Solid	300.0	2873
MB 880-2873/1-A	Method Blank	Soluble	Solid	300.0	2873
LCS 880-2873/2-A	Lab Control Sample	Soluble	Solid	300.0	2873
LCSD 880-2873/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2873
890-646-4 MS	FS19	Soluble	Solid	300.0	2873
890-646-4 MSD	FS19	Soluble	Solid	300.0	2873

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-646-1
SDG: TE012919259

Client Sample ID: SW01

Lab Sample ID: 890-646-1

Date Collected: 05/05/21 14:10

Matrix: Solid

Date Received: 05/07/21 10:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2886	05/10/21 10:50	MR	XM
Total/NA	Analysis	8021B		1	2884	05/10/21 15:04	MR	XM
Total/NA	Prep	8015NM Prep			2900	05/10/21 11:09	AM	XM
Total/NA	Analysis	8015B NM		1	2881	05/10/21 14:34	AJ	XM
Soluble	Leach	DI Leach			2873	05/08/21 13:31	SC	XM
Soluble	Analysis	300.0		1	2921	05/10/21 15:43	CH	XM

Client Sample ID: SW02

Lab Sample ID: 890-646-2

Date Collected: 05/05/21 14:25

Matrix: Solid

Date Received: 05/07/21 10:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2886	05/10/21 10:50	MR	XM
Total/NA	Analysis	8021B		1	2884	05/10/21 15:25	MR	XM
Total/NA	Prep	8015NM Prep			2900	05/10/21 11:09	AM	XM
Total/NA	Analysis	8015B NM		1	2881	05/10/21 14:55	AJ	XM
Soluble	Leach	DI Leach			2873	05/08/21 13:31	SC	XM
Soluble	Analysis	300.0		1	2921	05/10/21 15:47	CH	XM

Client Sample ID: SW03

Lab Sample ID: 890-646-3

Date Collected: 05/05/21 14:30

Matrix: Solid

Date Received: 05/07/21 10:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2886	05/10/21 10:50	MR	XM
Total/NA	Analysis	8021B		1	2884	05/10/21 15:45	MR	XM
Total/NA	Prep	8015NM Prep			2900	05/10/21 11:09	AM	XM
Total/NA	Analysis	8015B NM		1	2881	05/10/21 15:16	AJ	XM
Soluble	Leach	DI Leach			2873	05/08/21 13:31	SC	XM
Soluble	Analysis	300.0		1	2921	05/10/21 15:53	CH	XM

Client Sample ID: FS19

Lab Sample ID: 890-646-4

Date Collected: 05/05/21 14:35

Matrix: Solid

Date Received: 05/07/21 10:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2886	05/10/21 10:50	MR	XM
Total/NA	Analysis	8021B		1	2884	05/10/21 16:06	MR	XM
Total/NA	Prep	8015NM Prep			2900	05/10/21 11:09	AM	XM
Total/NA	Analysis	8015B NM		1	2881	05/10/21 15:36	AJ	XM
Soluble	Leach	DI Leach			2873	05/08/21 13:31	SC	XM
Soluble	Analysis	300.0		1	2921	05/10/21 15:58	CH	XM

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-646-1
SDG: TE012919259

Client Sample ID: FS20**Lab Sample ID: 890-646-5****Date Collected: 05/05/21 15:00****Matrix: Solid****Date Received: 05/07/21 10:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2886	05/10/21 10:50	MR	XM
Total/NA	Analysis	8021B		1	2884	05/10/21 16:26	MR	XM
Total/NA	Prep	8015NM Prep			2900	05/10/21 11:09	AM	XM
Total/NA	Analysis	8015B NM		1	2881	05/10/21 15:57	AJ	XM
Soluble	Leach	DI Leach			2873	05/08/21 13:31	SC	XM
Soluble	Analysis	300.0		1	2921	05/10/21 16:13	CH	XM

Client Sample ID: FS21**Lab Sample ID: 890-646-6****Date Collected: 05/05/21 15:10****Matrix: Solid****Date Received: 05/07/21 10:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2886	05/10/21 10:50	MR	XM
Total/NA	Analysis	8021B		1	2884	05/10/21 16:46	MR	XM
Total/NA	Prep	8015NM Prep			2900	05/10/21 11:09	AM	XM
Total/NA	Analysis	8015B NM		1	2881	05/10/21 16:18	AJ	XM
Soluble	Leach	DI Leach			2873	05/08/21 13:31	SC	XM
Soluble	Analysis	300.0		1	2921	05/10/21 16:18	CH	XM

Laboratory References:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-646-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-646-1
SDG: TE012919259

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-646-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-646-1	SW01	Solid	05/05/21 14:10	05/07/21 10:47	0 - 4.5
890-646-2	SW02	Solid	05/05/21 14:25	05/07/21 10:47	0 - 4.5
890-646-3	SW03	Solid	05/05/21 14:30	05/07/21 10:47	0 - 4.5
890-646-4	FS19	Solid	05/05/21 14:35	05/07/21 10:47	- 4.5
890-646-5	FS20	Solid	05/05/21 15:00	05/07/21 10:47	- 1
890-646-6	FS21	Solid	05/05/21 15:10	05/07/21 10:47	- 1

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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
 Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)
 Hobbs, NM (575-392-7550)

Chain of Custody

Work Order No: _____

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Page 1 of 1

Project Manager:	Den Moir	Bill to: (if different)	Kyle Litrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	lbellill@xenv.com

Program:	UST/PST	PRP	Brownfields	RC	Superfund
State of Project:					
Reporting Level:	Level II	Level III	ST/UST	RRP	Level IV
Deliverables:	EDD	ADAPT	Other:		

Project Name:	FRD DFL	Turn Around	
Project Number:	TC202919259	Routine	<input type="checkbox"/>
P.O. Number:	ZRR-4625	Rush:	24HR
Sampler's Name:	Benjamin Bell	Due Date:	

Temperature (°C):	5.6	Thermometer ID	TMM-007
Received Intact:	Yes	Correction Factor:	5.4
Cooler Custody Seals:	Yes	Total Containers:	
Sample Custody Seals:	Yes		



890-646 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)
SWD1	S	5/5/21	1410	0-4.5'	1	X	X	X
SWD2	S		1425	0-4.5'	1	X	X	X
SWD3	S		1430	0-4.5'	1	X	X	X
FS19	S		1435	4.5'	1	X	X	X
FS20	S		1500	1'	1	X	X	X
FS21	S		1510	1'	1	X	X	X

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed: TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U 1634 L245.1 L2470 L2471 Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	5/7/21 1038	<i>[Signature]</i>	Garry Drake	5/7/21 10:47

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Order Completion Information

Creator *Cloe Clifton*
 Filled by
 Sent Date
 Sent Via
 Tracking #

Bottle Order #
 Request From Client 5/7/2021
 Date Order Posted
 Order Status Ready To Process
 Prepared By
 Deliver By Date: 5/7/2021 11:59:00PM
 Lab Project Number

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
------	-------------	-----	-------------------------	--------------	--------	--------	-------------	----------	-------

Notes to Field Staff:

Health and Safety Notes:

Preservative Comment



Scan QR code for field sampler instructions

Relinquished By	Company	Date	Time	Received By	Company	Seal #:
<i>Cloe Clifton</i>	<i>5-7-21</i>					
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.



Environment Testing America

ANALYTICAL REPORT

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-655-1
Laboratory Sample Delivery Group: Eddy County NM
Client Project/Site: JRU DI 1 Combined
Revision: 1

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Dan Moir

Authorized for release by:
5/12/2021 5:50:38 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com



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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Laboratory Job ID: 890-655-1
SDG: Eddy County NM

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-655-1
SDG: Eddy County NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins Xenco, Carlsbad

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-655-1
SDG: Eddy County NM

Job ID: 890-655-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-655-1

Receipt

The samples were received on 5/11/2021 12:48 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: BH01 C (890-655-1) and BH02 C (890-655-2).

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.



Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-655-1
SDG: Eddy County NM

Client Sample ID: BH01 C

Lab Sample ID: 890-655-1

Date Collected: 05/11/21 09:55

Matrix: Solid

Date Received: 05/11/21 12:48

Sample Depth: 8'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/12/21 09:29	05/12/21 14:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/12/21 09:29	05/12/21 14:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/12/21 09:29	05/12/21 14:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/12/21 09:29	05/12/21 14:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/12/21 09:29	05/12/21 14:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/12/21 09:29	05/12/21 14:48	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/12/21 09:29	05/12/21 14:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	05/12/21 09:29	05/12/21 14:48	1
1,4-Difluorobenzene (Surr)	122		70 - 130	05/12/21 09:29	05/12/21 14:48	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/12/21 11:50	05/12/21 14:35	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/12/21 11:50	05/12/21 14:35	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/12/21 11:50	05/12/21 14:35	1
Total TPH	<49.9	U	49.9	mg/Kg		05/12/21 11:50	05/12/21 14:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130	05/12/21 11:50	05/12/21 14:35	1
o-Terphenyl	102		70 - 130	05/12/21 11:50	05/12/21 14:35	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.1	F1	5.04	mg/Kg			05/12/21 14:44	1

Client Sample ID: BH02 C

Lab Sample ID: 890-655-2

Date Collected: 05/11/21 10:20

Matrix: Solid

Date Received: 05/11/21 12:48

Sample Depth: 8'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/12/21 09:29	05/12/21 15:09	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/12/21 09:29	05/12/21 15:09	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/12/21 09:29	05/12/21 15:09	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/12/21 09:29	05/12/21 15:09	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/12/21 09:29	05/12/21 15:09	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/12/21 09:29	05/12/21 15:09	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/12/21 09:29	05/12/21 15:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	05/12/21 09:29	05/12/21 15:09	1
1,4-Difluorobenzene (Surr)	116		70 - 130	05/12/21 09:29	05/12/21 15:09	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI 1 Combined

Job ID: 890-655-1
 SDG: Eddy County NM

Client Sample ID: BH02 C
Date Collected: 05/11/21 10:20
Date Received: 05/11/21 12:48
Sample Depth: 8'

Lab Sample ID: 890-655-2
Matrix: Solid

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/12/21 11:50	05/12/21 14:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/12/21 11:50	05/12/21 14:56	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/12/21 11:50	05/12/21 14:56	1
Total TPH	<49.9	U	49.9	mg/Kg		05/12/21 11:50	05/12/21 14:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130	05/12/21 11:50	05/12/21 14:56	1
o-Terphenyl	96		70 - 130	05/12/21 11:50	05/12/21 14:56	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	43.8		5.03	mg/Kg			05/12/21 15:00	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-655-1
SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)**Matrix: Solid****Prep Type: Total/NA**

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-655-1	BH01 C	100	122
890-655-2	BH02 C	100	116
LCS 880-3013/1-A	Lab Control Sample	93	115
LCSD 880-3013/2-A	Lab Control Sample Dup	92	109
MB 880-3013/5-A	Method Blank	101	85

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)**Matrix: Solid****Prep Type: Total/NA**

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
890-655-1	BH01 C	88	102
890-655-2	BH02 C	85	96
LCS 880-3010/2-A	Lab Control Sample	115	127
LCSD 880-3010/3-A	Lab Control Sample Dup	98	106
MB 880-3010/1-A	Method Blank	90	103

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-655-1
SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3013/5-A
Matrix: Solid
Analysis Batch: 3016

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3013

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/12/21 09:29	05/12/21 14:05	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/12/21 09:29	05/12/21 14:05	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/12/21 09:29	05/12/21 14:05	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/12/21 09:29	05/12/21 14:05	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/12/21 09:29	05/12/21 14:05	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/12/21 09:29	05/12/21 14:05	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/12/21 09:29	05/12/21 14:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	05/12/21 09:29	05/12/21 14:05	1
1,4-Difluorobenzene (Surr)	85		70 - 130	05/12/21 09:29	05/12/21 14:05	1

Lab Sample ID: LCS 880-3013/1-A
Matrix: Solid
Analysis Batch: 3016

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3013

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07611		mg/Kg		76	70 - 130
Toluene	0.100	0.08793		mg/Kg		88	70 - 130
Ethylbenzene	0.100	0.08858		mg/Kg		89	70 - 130
m-Xylene & p-Xylene	0.200	0.1795		mg/Kg		90	70 - 130
o-Xylene	0.100	0.08700		mg/Kg		87	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		70 - 130
1,4-Difluorobenzene (Surr)	115		70 - 130

Lab Sample ID: LCSD 880-3013/2-A
Matrix: Solid
Analysis Batch: 3016

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3013

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.08651		mg/Kg		87	70 - 130	13	35
Toluene	0.100	0.09615		mg/Kg		96	70 - 130	9	35
Ethylbenzene	0.100	0.09322		mg/Kg		93	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.1881		mg/Kg		94	70 - 130	5	35
o-Xylene	0.100	0.09218		mg/Kg		92	70 - 130	6	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-655-1
SDG: Eddy County NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-3010/1-A
Matrix: Solid
Analysis Batch: 3006

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3010

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/12/21 08:24	05/12/21 10:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/12/21 08:24	05/12/21 10:29	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/12/21 08:24	05/12/21 10:29	1
Total TPH	<50.0	U	50.0	mg/Kg		05/12/21 08:24	05/12/21 10:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130	05/12/21 08:24	05/12/21 10:29	1
o-Terphenyl	103		70 - 130	05/12/21 08:24	05/12/21 10:29	1

Lab Sample ID: LCS 880-3010/2-A
Matrix: Solid
Analysis Batch: 3006

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3010

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	917.5		mg/Kg		92	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1080		mg/Kg		108	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	127		70 - 130

Lab Sample ID: LCSD 880-3010/3-A
Matrix: Solid
Analysis Batch: 3006

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3010

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	803.6		mg/Kg		80	70 - 130	13	20
Diesel Range Organics (Over C10-C28)	1000	1044		mg/Kg		104	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	106		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3019/1-A
Matrix: Solid
Analysis Batch: 3027

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/12/21 12:13	1

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QC Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI 1 Combined

Job ID: 890-655-1
 SDG: Eddy County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3019/2-A
Matrix: Solid
Analysis Batch: 3027

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	230.6		mg/Kg		92	90 - 110

Lab Sample ID: LCSD 880-3019/3-A
Matrix: Solid
Analysis Batch: 3027

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	229.7		mg/Kg		92	90 - 110	0	20

Lab Sample ID: 890-655-1 MS
Matrix: Solid
Analysis Batch: 3027

Client Sample ID: BH01 C
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	11.1	F1	252	233.6	F1	mg/Kg		88	90 - 110

Lab Sample ID: 890-655-1 MSD
Matrix: Solid
Analysis Batch: 3027

Client Sample ID: BH01 C
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	11.1	F1	252	241.6		mg/Kg		91	90 - 110	3	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-655-1
SDG: Eddy County NM

GC VOA

Prep Batch: 3013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-655-1	BH01 C	Total/NA	Solid	5035	
890-655-2	BH02 C	Total/NA	Solid	5035	
MB 880-3013/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3013/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3013/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-655-1	BH01 C	Total/NA	Solid	8021B	3013
890-655-2	BH02 C	Total/NA	Solid	8021B	3013
MB 880-3013/5-A	Method Blank	Total/NA	Solid	8021B	3013
LCS 880-3013/1-A	Lab Control Sample	Total/NA	Solid	8021B	3013
LCSD 880-3013/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3013

GC Semi VOA

Analysis Batch: 3006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-655-1	BH01 C	Total/NA	Solid	8015B NM	3010
890-655-2	BH02 C	Total/NA	Solid	8015B NM	3010
MB 880-3010/1-A	Method Blank	Total/NA	Solid	8015B NM	3010
LCS 880-3010/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3010
LCSD 880-3010/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3010

Prep Batch: 3010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-655-1	BH01 C	Total/NA	Solid	8015NM Prep	
890-655-2	BH02 C	Total/NA	Solid	8015NM Prep	
MB 880-3010/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3010/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3010/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 3019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-655-1	BH01 C	Soluble	Solid	DI Leach	
890-655-2	BH02 C	Soluble	Solid	DI Leach	
MB 880-3019/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3019/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3019/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-655-1 MS	BH01 C	Soluble	Solid	DI Leach	
890-655-1 MSD	BH01 C	Soluble	Solid	DI Leach	

Analysis Batch: 3027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-655-1	BH01 C	Soluble	Solid	300.0	3019
890-655-2	BH02 C	Soluble	Solid	300.0	3019
MB 880-3019/1-A	Method Blank	Soluble	Solid	300.0	3019
LCS 880-3019/2-A	Lab Control Sample	Soluble	Solid	300.0	3019
LCSD 880-3019/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3019
890-655-1 MS	BH01 C	Soluble	Solid	300.0	3019

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-655-1
SDG: Eddy County NM

HPLC/IC (Continued)

Analysis Batch: 3027 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-655-1 MSD	BH01 C	Soluble	Solid	300.0	3019

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Lab Chronicle

Client: WSP USA Inc.
 Project/Site: JRU DI 1 Combined

Job ID: 890-655-1
 SDG: Eddy County NM

Client Sample ID: BH01 C
Date Collected: 05/11/21 09:55
Date Received: 05/11/21 12:48

Lab Sample ID: 890-655-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3013	05/12/21 09:29	KL	XM
Total/NA	Analysis	8021B		1	3016	05/12/21 14:48	KL	XM
Total/NA	Prep	8015NM Prep			3010	05/12/21 11:50	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/12/21 14:35	AJ	XM
Soluble	Leach	DI Leach			3019	05/12/21 09:46	CH	XM
Soluble	Analysis	300.0		1	3027	05/12/21 14:44	CH	XM

Client Sample ID: BH02 C
Date Collected: 05/11/21 10:20
Date Received: 05/11/21 12:48

Lab Sample ID: 890-655-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3013	05/12/21 09:29	KL	XM
Total/NA	Analysis	8021B		1	3016	05/12/21 15:09	KL	XM
Total/NA	Prep	8015NM Prep			3010	05/12/21 11:50	DM	XM
Total/NA	Analysis	8015B NM		1	3006	05/12/21 14:56	AJ	XM
Soluble	Leach	DI Leach			3019	05/12/21 09:46	CH	XM
Soluble	Analysis	300.0		1	3027	05/12/21 15:00	CH	XM

Laboratory References:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-655-1
SDG: Eddy County NM

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: WSP USA Inc.
 Project/Site: JRU DI 1 Combined

Job ID: 890-655-1
 SDG: Eddy County NM

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-655-1
SDG: Eddy County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-655-1	BH01 C	Solid	05/11/21 09:55	05/11/21 12:48	8'
890-655-2	BH02 C	Solid	05/11/21 10:20	05/11/21 12:48	8'

- 1
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- 9
- 10
- 11
- 12
- 13
- 14

- 1
- 2
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- 9
- 10
- 11
- 12
- 13
- 14

Eurofins Xenco, Carlsbad

1089 N Canal St.
 Carlsbad NM 88220
 Phone 575-988-3199 Fax: 575-988-3199

Chain of Custody Record



Environment Testing America

Client Information (Sub Contract Lab)		Sampler	Lab #/PI	Carrier Tracking No(s)	COC No:				
Client Contact:	Phone		Kramer Jessica		890-213-1				
Shipping/Receiving Company:	E-Mail		Jessica.kramer@eurofinsnet.com	State of Origin:	Page 1 of 1				
Eurofins Xenco			Accreditations Required (See note): NELAP - Louisiana NELAP - Texas	New Mexico	Page 1 of 1				
Address:	Due Date Requested				Job #: 890-655-1				
1211 W Florida Ave	5/12/2021				Preservation Codes				
City: Midland	TAT Requested (days):				A HCl B NaOH C Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Amthior H Ascorbic Acid I Ice J DI Water K EDTA L EDA M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S H2SO4 T TSP Dodecahydrate U Acetone V MCAA W PH 4.5 Z other (specify)				
State Zip: TX, 79701	PO #:								
Phone: 432-704-5440(Tel)	WQC #:								
Email:	Project #:								
	89000004								
Project Name: JRU DI 1 Combined	SSOV#:								
Site:									
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Soil, O=Organic, M=Metals)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:
BH01 C (890-655-1)	5/11/21	09:55	Mountain	Solid	Solid	X	X	X	
BH02 C (890-655-2)	5/11/21	10:20	Mountain	Solid	Solid	X	X	X	
<p>Note: Since laboratory accreditations are subject to change Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC</p>									
Possible Hazard Identification									
Unconfirmed									
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2									
Empty Kit Relinquished by		Date	Time	Method of Shipment:		Special Instructions/QC Requirements:			
Relinquished by: Dave Cuff		Date/Time: 5/11/21		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Relinquished by:		Date/Time:		Received by: [Signature]		Date/Time: 5/21/21 11:30 AM			
Relinquished by:		Date/Time:		Received by:		Date/Time:			
Custody Seals Intact: A Yes A No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks:					

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-655-1
 SDG Number: Eddy County NM
 List Source: Eurofins Carlsbad

Login Number: 655
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	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-655-1
SDG Number: Eddy County NM

Login Number: 655
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 05/12/21 11:33 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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Environment Testing
America

ANALYTICAL REPORT

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-663-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU D11

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Dan Moir

Authorized for release by:
5/13/2021 9:00:12 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com



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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: WSP USA Inc.
Project/Site: JRU DI1

Laboratory Job ID: 890-663-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-663-1
SDG: TE012919259

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

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
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins Xenco, Carlsbad

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-663-1
SDG: TE012919259

Job ID: 890-663-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-663-1

Receipt

The samples were received on 5/12/2021 4:55 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 3.4°C

GC VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-663-1
SDG: TE012919259

Client Sample ID: BH01

Lab Sample ID: 890-663-1

Date Collected: 05/11/21 15:10

Matrix: Solid

Date Received: 05/12/21 16:55

Sample Depth: 1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/13/21 14:00	05/13/21 15:18	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/13/21 14:00	05/13/21 15:18	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/13/21 14:00	05/13/21 15:18	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/13/21 14:00	05/13/21 15:18	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/13/21 14:00	05/13/21 15:18	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/13/21 14:00	05/13/21 15:18	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/13/21 14:00	05/13/21 15:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	05/13/21 14:00	05/13/21 15:18	1
1,4-Difluorobenzene (Surr)	101		70 - 130	05/13/21 14:00	05/13/21 15:18	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/13/21 11:18	05/13/21 15:14	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/13/21 11:18	05/13/21 15:14	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/13/21 11:18	05/13/21 15:14	1
Total TPH	<49.9	U	49.9	mg/Kg		05/13/21 11:18	05/13/21 15:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130	05/13/21 11:18	05/13/21 15:14	1
o-Terphenyl	102		70 - 130	05/13/21 11:18	05/13/21 15:14	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.2		4.99	mg/Kg			05/13/21 17:13	1

Client Sample ID: BH01A

Lab Sample ID: 890-663-2

Date Collected: 05/11/21 15:20

Matrix: Solid

Date Received: 05/12/21 16:55

Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/13/21 14:00	05/13/21 15:38	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/13/21 14:00	05/13/21 15:38	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/13/21 14:00	05/13/21 15:38	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		05/13/21 14:00	05/13/21 15:38	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/13/21 14:00	05/13/21 15:38	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		05/13/21 14:00	05/13/21 15:38	1
Total BTEX	<0.00401	U	0.00401	mg/Kg		05/13/21 14:00	05/13/21 15:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130	05/13/21 14:00	05/13/21 15:38	1
1,4-Difluorobenzene (Surr)	102		70 - 130	05/13/21 14:00	05/13/21 15:38	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-663-1
SDG: TE012919259

Client Sample ID: BH01A

Lab Sample ID: 890-663-2

Date Collected: 05/11/21 15:20

Matrix: Solid

Date Received: 05/12/21 16:55

Sample Depth: 4'

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/13/21 11:18	05/13/21 15:34	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/13/21 11:18	05/13/21 15:34	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/13/21 11:18	05/13/21 15:34	1
Total TPH	<49.8	U	49.8	mg/Kg		05/13/21 11:18	05/13/21 15:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130	05/13/21 11:18	05/13/21 15:34	1
o-Terphenyl	108		70 - 130	05/13/21 11:18	05/13/21 15:34	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	70.4		4.96	mg/Kg			05/13/21 17:18	1

Client Sample ID: BH02

Lab Sample ID: 890-663-3

Date Collected: 05/11/21 14:20

Matrix: Solid

Date Received: 05/12/21 16:55

Sample Depth: 1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/13/21 14:00	05/13/21 15:58	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/13/21 14:00	05/13/21 15:58	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/13/21 14:00	05/13/21 15:58	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/13/21 14:00	05/13/21 15:58	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/13/21 14:00	05/13/21 15:58	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/13/21 14:00	05/13/21 15:58	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/13/21 14:00	05/13/21 15:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	05/13/21 14:00	05/13/21 15:58	1
1,4-Difluorobenzene (Surr)	103		70 - 130	05/13/21 14:00	05/13/21 15:58	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/13/21 11:18	05/13/21 15:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/13/21 11:18	05/13/21 15:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/13/21 11:18	05/13/21 15:55	1
Total TPH	<50.0	U	50.0	mg/Kg		05/13/21 11:18	05/13/21 15:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130	05/13/21 11:18	05/13/21 15:55	1
o-Terphenyl	111		70 - 130	05/13/21 11:18	05/13/21 15:55	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.2		4.97	mg/Kg			05/13/21 17:23	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-663-1
SDG: TE012919259

Client Sample ID: BH02A

Lab Sample ID: 890-663-4

Date Collected: 05/11/21 14:30

Matrix: Solid

Date Received: 05/12/21 16:55

Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/13/21 14:00	05/13/21 14:35	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/13/21 14:00	05/13/21 14:35	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/13/21 14:00	05/13/21 14:35	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		05/13/21 14:00	05/13/21 14:35	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/13/21 14:00	05/13/21 14:35	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		05/13/21 14:00	05/13/21 14:35	1
Total BTEX	<0.00403	U	0.00403	mg/Kg		05/13/21 14:00	05/13/21 14:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	05/13/21 14:00	05/13/21 14:35	1
1,4-Difluorobenzene (Surr)	86		70 - 130	05/13/21 14:00	05/13/21 14:35	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/13/21 11:18	05/13/21 16:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/13/21 11:18	05/13/21 16:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/13/21 11:18	05/13/21 16:16	1
Total TPH	<50.0	U	50.0	mg/Kg		05/13/21 11:18	05/13/21 16:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	05/13/21 11:18	05/13/21 16:16	1
o-Terphenyl	104		70 - 130	05/13/21 11:18	05/13/21 16:16	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	48.2		5.00	mg/Kg			05/13/21 17:28	1

Client Sample ID: BH03

Lab Sample ID: 890-663-5

Date Collected: 05/11/21 13:45

Matrix: Solid

Date Received: 05/12/21 16:55

Sample Depth: 1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/13/21 14:00	05/13/21 14:59	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/13/21 14:00	05/13/21 14:59	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/13/21 14:00	05/13/21 14:59	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/13/21 14:00	05/13/21 14:59	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/13/21 14:00	05/13/21 14:59	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/13/21 14:00	05/13/21 14:59	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/13/21 14:00	05/13/21 14:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	138	S1+	70 - 130	05/13/21 14:00	05/13/21 14:59	1
1,4-Difluorobenzene (Surr)	88		70 - 130	05/13/21 14:00	05/13/21 14:59	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-663-1
SDG: TE012919259

Client Sample ID: BH03

Lab Sample ID: 890-663-5

Date Collected: 05/11/21 13:45

Matrix: Solid

Date Received: 05/12/21 16:55

Sample Depth: 1'

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/13/21 11:18	05/13/21 16:36	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/13/21 11:18	05/13/21 16:36	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/13/21 11:18	05/13/21 16:36	1
Total TPH	<49.9	U	49.9	mg/Kg		05/13/21 11:18	05/13/21 16:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130	05/13/21 11:18	05/13/21 16:36	1
o-Terphenyl	92		70 - 130	05/13/21 11:18	05/13/21 16:36	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	71.9		25.0	mg/Kg			05/13/21 17:33	5

Client Sample ID: BH03A

Lab Sample ID: 890-663-6

Date Collected: 05/11/21 14:00

Matrix: Solid

Date Received: 05/12/21 16:55

Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/13/21 14:00	05/13/21 15:24	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/13/21 14:00	05/13/21 15:24	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/13/21 14:00	05/13/21 15:24	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		05/13/21 14:00	05/13/21 15:24	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/13/21 14:00	05/13/21 15:24	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		05/13/21 14:00	05/13/21 15:24	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		05/13/21 14:00	05/13/21 15:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	05/13/21 14:00	05/13/21 15:24	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/13/21 14:00	05/13/21 15:24	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/13/21 11:33	05/13/21 15:55	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/13/21 11:33	05/13/21 15:55	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/13/21 11:33	05/13/21 15:55	1
Total TPH	<49.9	U	49.9	mg/Kg		05/13/21 11:33	05/13/21 15:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130	05/13/21 11:33	05/13/21 15:55	1
o-Terphenyl	118		70 - 130	05/13/21 11:33	05/13/21 15:55	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	73.6		4.95	mg/Kg			05/13/21 17:39	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-663-1
SDG: TE012919259

Client Sample ID: BH04

Lab Sample ID: 890-663-7

Date Collected: 05/10/21 12:45

Matrix: Solid

Date Received: 05/12/21 16:55

Sample Depth: 1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/13/21 14:00	05/13/21 15:49	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/13/21 14:00	05/13/21 15:49	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/13/21 14:00	05/13/21 15:49	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/13/21 14:00	05/13/21 15:49	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/13/21 14:00	05/13/21 15:49	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/13/21 14:00	05/13/21 15:49	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/13/21 14:00	05/13/21 15:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	05/13/21 14:00	05/13/21 15:49	1
1,4-Difluorobenzene (Surr)	101		70 - 130	05/13/21 14:00	05/13/21 15:49	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/13/21 11:33	05/13/21 16:16	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/13/21 11:33	05/13/21 16:16	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/13/21 11:33	05/13/21 16:16	1
Total TPH	<49.9	U	49.9	mg/Kg		05/13/21 11:33	05/13/21 16:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	05/13/21 11:33	05/13/21 16:16	1
o-Terphenyl	113		70 - 130	05/13/21 11:33	05/13/21 16:16	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	58.3		5.02	mg/Kg			05/13/21 20:33	1

Client Sample ID: BH04A

Lab Sample ID: 890-663-8

Date Collected: 05/10/21 13:00

Matrix: Solid

Date Received: 05/12/21 16:55

Sample Depth: 4'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/13/21 14:00	05/13/21 16:14	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/13/21 14:00	05/13/21 16:14	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/13/21 14:00	05/13/21 16:14	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/13/21 14:00	05/13/21 16:14	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/13/21 14:00	05/13/21 16:14	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/13/21 14:00	05/13/21 16:14	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/13/21 14:00	05/13/21 16:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	05/13/21 14:00	05/13/21 16:14	1
1,4-Difluorobenzene (Surr)	85		70 - 130	05/13/21 14:00	05/13/21 16:14	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-663-1
SDG: TE012919259

Client Sample ID: BH04A

Lab Sample ID: 890-663-8

Date Collected: 05/10/21 13:00

Matrix: Solid

Date Received: 05/12/21 16:55

Sample Depth: 4'

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/13/21 11:33	05/13/21 16:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/13/21 11:33	05/13/21 16:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/13/21 11:33	05/13/21 16:36	1
Total TPH	<50.0	U	50.0	mg/Kg		05/13/21 11:33	05/13/21 16:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130	05/13/21 11:33	05/13/21 16:36	1
o-Terphenyl	125		70 - 130	05/13/21 11:33	05/13/21 16:36	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	122		5.05	mg/Kg			05/13/21 19:07	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-663-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-663-1	BH01	113	101
890-663-2	BH01A	115	102
890-663-3	BH02	113	103
890-663-4	BH02A	104	86
890-663-5	BH03	138 S1+	88
890-663-6	BH03A	104	98
890-663-7	BH04	111	101
890-663-8	BH04A	108	85
LCS 880-3052/1-A	Lab Control Sample	101	96
LCS 880-3053/1-A	Lab Control Sample	98	105
LCSD 880-3052/2-A	Lab Control Sample Dup	102	97
LCSD 880-3053/2-A	Lab Control Sample Dup	80	116
MB 880-3052/5-A	Method Blank	109	92
MB 880-3053/5-A	Method Blank	70	83

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
890-663-1	BH01	99	102
890-663-2	BH01A	111	108
890-663-3	BH02	113	111
890-663-4	BH02A	106	104
890-663-5	BH03	95	92
890-663-6	BH03A	100	118
890-663-7	BH04	97	113
890-663-8	BH04A	105	125
LCS 880-3064/2-A	Lab Control Sample	105	96
LCS 880-3065/2-A	Lab Control Sample	50 S1-	57 S1-
LCSD 880-3064/3-A	Lab Control Sample Dup	106	98
LCSD 880-3065/3-A	Lab Control Sample Dup	99	108
MB 880-3064/1-A	Method Blank	55 S1-	55 S1-
MB 880-3065/1-A	Method Blank	109	132 S1+

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-663-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3052/5-A
Matrix: Solid
Analysis Batch: 3049

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3052

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/13/21 11:30	05/13/21 12:43	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/13/21 11:30	05/13/21 12:43	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/13/21 11:30	05/13/21 12:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/13/21 11:30	05/13/21 12:43	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/13/21 11:30	05/13/21 12:43	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/13/21 11:30	05/13/21 12:43	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/13/21 11:30	05/13/21 12:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	05/13/21 11:30	05/13/21 12:43	1
1,4-Difluorobenzene (Surr)	92		70 - 130	05/13/21 11:30	05/13/21 12:43	1

Lab Sample ID: LCS 880-3052/1-A
Matrix: Solid
Analysis Batch: 3049

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3052

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07855		mg/Kg		79	70 - 130
Toluene	0.100	0.09284		mg/Kg		93	70 - 130
Ethylbenzene	0.100	0.09690		mg/Kg		97	70 - 130
m-Xylene & p-Xylene	0.200	0.1979		mg/Kg		99	70 - 130
o-Xylene	0.100	0.09965		mg/Kg		100	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: LCSD 880-3052/2-A
Matrix: Solid
Analysis Batch: 3049

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3052

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.08049		mg/Kg		80	70 - 130	2	35
Toluene	0.100	0.09287		mg/Kg		93	70 - 130	0	35
Ethylbenzene	0.100	0.09778		mg/Kg		98	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.1986		mg/Kg		99	70 - 130	0	35
o-Xylene	0.100	0.1008		mg/Kg		101	70 - 130	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: MB 880-3053/5-A
Matrix: Solid
Analysis Batch: 3051

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3053

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/13/21 11:30	05/13/21 12:51	1

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-663-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-3053/5-A
Matrix: Solid
Analysis Batch: 3051

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3053

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.00200	U	0.00200	mg/Kg		05/13/21 11:30	05/13/21 12:51	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/13/21 11:30	05/13/21 12:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/13/21 11:30	05/13/21 12:51	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/13/21 11:30	05/13/21 12:51	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/13/21 11:30	05/13/21 12:51	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/13/21 11:30	05/13/21 12:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	70		70 - 130	05/13/21 11:30	05/13/21 12:51	1
1,4-Difluorobenzene (Surr)	83		70 - 130	05/13/21 11:30	05/13/21 12:51	1

Lab Sample ID: LCS 880-3053/1-A
Matrix: Solid
Analysis Batch: 3051

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3053

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.1044		mg/Kg		104	70 - 130
Toluene	0.100	0.1029		mg/Kg		103	70 - 130
Ethylbenzene	0.100	0.1052		mg/Kg		105	70 - 130
m-Xylene & p-Xylene	0.200	0.2037		mg/Kg		102	70 - 130
o-Xylene	0.100	0.09613		mg/Kg		96	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: LCSD 880-3053/2-A
Matrix: Solid
Analysis Batch: 3051

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3053

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.100	0.09971		mg/Kg		100	70 - 130	5	35
Toluene	0.100	0.1002		mg/Kg		100	70 - 130	3	35
Ethylbenzene	0.100	0.1066		mg/Kg		107	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.2085		mg/Kg		104	70 - 130	2	35
o-Xylene	0.100	0.1004		mg/Kg		100	70 - 130	4	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	80		70 - 130
1,4-Difluorobenzene (Surr)	116		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-663-1
SDG: TE012919259

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-3064/1-A
Matrix: Solid
Analysis Batch: 3057

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3064

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/13/21 11:18	05/13/21 11:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/13/21 11:18	05/13/21 11:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/13/21 11:18	05/13/21 11:47	1
Total TPH	<50.0	U	50.0	mg/Kg		05/13/21 11:18	05/13/21 11:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	55	S1-	70 - 130	05/13/21 11:18	05/13/21 11:47	1
o-Terphenyl	55	S1-	70 - 130	05/13/21 11:18	05/13/21 11:47	1

Lab Sample ID: LCS 880-3064/2-A
Matrix: Solid
Analysis Batch: 3057

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3064

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	877.8		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	1000	952.0		mg/Kg		95	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: LCSD 880-3064/3-A
Matrix: Solid
Analysis Batch: 3057

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3064

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	864.6		mg/Kg		86	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	973.3		mg/Kg		97	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: MB 880-3065/1-A
Matrix: Solid
Analysis Batch: 3067

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3065

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/13/21 11:33	05/13/21 11:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/13/21 11:33	05/13/21 11:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/13/21 11:33	05/13/21 11:47	1
Total TPH	<50.0	U	50.0	mg/Kg		05/13/21 11:33	05/13/21 11:47	1

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-663-1
SDG: TE012919259

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130	05/13/21 11:33	05/13/21 11:47	1
o-Terphenyl	132	S1+	70 - 130	05/13/21 11:33	05/13/21 11:47	1

Lab Sample ID: LCS 880-3065/2-A
Matrix: Solid
Analysis Batch: 3067

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3065

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	846.2		mg/Kg		85	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1085		mg/Kg		109	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	50	S1-	70 - 130
o-Terphenyl	57	S1-	70 - 130

Lab Sample ID: LCSD 880-3065/3-A
Matrix: Solid
Analysis Batch: 3067

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3065

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	841.4		mg/Kg		84	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	1039		mg/Kg		104	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	108		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3070/1-A
Matrix: Solid
Analysis Batch: 3078

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/13/21 16:11	1

Lab Sample ID: LCS 880-3070/2-A
Matrix: Solid
Analysis Batch: 3078

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	244.7		mg/Kg		98	90 - 110

Lab Sample ID: LCSD 880-3070/3-A
Matrix: Solid
Analysis Batch: 3078

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	243.9		mg/Kg		98	90 - 110	0	20

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-663-1
SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-663-6 MS
Matrix: Solid
Analysis Batch: 3078

Client Sample ID: BH03A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	73.6		248	313.6		mg/Kg		97	90 - 110

Lab Sample ID: 890-663-6 MSD
Matrix: Solid
Analysis Batch: 3078

Client Sample ID: BH03A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	73.6		248	312.6		mg/Kg		97	90 - 110	0	20

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-663-1
SDG: TE012919259

GC VOA

Analysis Batch: 3049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-663-1	BH01	Total/NA	Solid	8021B	3052
890-663-2	BH01A	Total/NA	Solid	8021B	3052
890-663-3	BH02	Total/NA	Solid	8021B	3052
MB 880-3052/5-A	Method Blank	Total/NA	Solid	8021B	3052
LCS 880-3052/1-A	Lab Control Sample	Total/NA	Solid	8021B	3052
LCSD 880-3052/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3052

Analysis Batch: 3051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-663-4	BH02A	Total/NA	Solid	8021B	3053
890-663-5	BH03	Total/NA	Solid	8021B	3053
890-663-6	BH03A	Total/NA	Solid	8021B	3053
890-663-7	BH04	Total/NA	Solid	8021B	3053
890-663-8	BH04A	Total/NA	Solid	8021B	3053
MB 880-3053/5-A	Method Blank	Total/NA	Solid	8021B	3053
LCS 880-3053/1-A	Lab Control Sample	Total/NA	Solid	8021B	3053
LCSD 880-3053/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3053

Prep Batch: 3052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-663-1	BH01	Total/NA	Solid	5035	
890-663-2	BH01A	Total/NA	Solid	5035	
890-663-3	BH02	Total/NA	Solid	5035	
MB 880-3052/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3052/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3052/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 3053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-663-4	BH02A	Total/NA	Solid	5035	
890-663-5	BH03	Total/NA	Solid	5035	
890-663-6	BH03A	Total/NA	Solid	5035	
890-663-7	BH04	Total/NA	Solid	5035	
890-663-8	BH04A	Total/NA	Solid	5035	
MB 880-3053/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3053/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3053/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 3057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-663-1	BH01	Total/NA	Solid	8015B NM	3064
890-663-2	BH01A	Total/NA	Solid	8015B NM	3064
890-663-3	BH02	Total/NA	Solid	8015B NM	3064
890-663-4	BH02A	Total/NA	Solid	8015B NM	3064
890-663-5	BH03	Total/NA	Solid	8015B NM	3064
MB 880-3064/1-A	Method Blank	Total/NA	Solid	8015B NM	3064
LCS 880-3064/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3064
LCSD 880-3064/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3064

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-663-1
SDG: TE012919259

GC Semi VOA

Prep Batch: 3064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-663-1	BH01	Total/NA	Solid	8015NM Prep	
890-663-2	BH01A	Total/NA	Solid	8015NM Prep	
890-663-3	BH02	Total/NA	Solid	8015NM Prep	
890-663-4	BH02A	Total/NA	Solid	8015NM Prep	
890-663-5	BH03	Total/NA	Solid	8015NM Prep	
MB 880-3064/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3064/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3064/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Prep Batch: 3065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-663-6	BH03A	Total/NA	Solid	8015NM Prep	
890-663-7	BH04	Total/NA	Solid	8015NM Prep	
890-663-8	BH04A	Total/NA	Solid	8015NM Prep	
MB 880-3065/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3065/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3065/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-663-6	BH03A	Total/NA	Solid	8015B NM	3065
890-663-7	BH04	Total/NA	Solid	8015B NM	3065
890-663-8	BH04A	Total/NA	Solid	8015B NM	3065
MB 880-3065/1-A	Method Blank	Total/NA	Solid	8015B NM	3065
LCS 880-3065/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3065
LCSD 880-3065/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3065

HPLC/IC

Leach Batch: 3070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-663-1	BH01	Soluble	Solid	DI Leach	
890-663-2	BH01A	Soluble	Solid	DI Leach	
890-663-3	BH02	Soluble	Solid	DI Leach	
890-663-4	BH02A	Soluble	Solid	DI Leach	
890-663-5	BH03	Soluble	Solid	DI Leach	
890-663-6	BH03A	Soluble	Solid	DI Leach	
890-663-7	BH04	Soluble	Solid	DI Leach	
890-663-8	BH04A	Soluble	Solid	DI Leach	
MB 880-3070/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3070/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3070/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-663-6 MS	BH03A	Soluble	Solid	DI Leach	
890-663-6 MSD	BH03A	Soluble	Solid	DI Leach	

Analysis Batch: 3078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-663-1	BH01	Soluble	Solid	300.0	3070
890-663-2	BH01A	Soluble	Solid	300.0	3070
890-663-3	BH02	Soluble	Solid	300.0	3070
890-663-4	BH02A	Soluble	Solid	300.0	3070

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-663-1
SDG: TE012919259

HPLC/IC (Continued)

Analysis Batch: 3078 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-663-5	BH03	Soluble	Solid	300.0	3070
890-663-6	BH03A	Soluble	Solid	300.0	3070
890-663-7	BH04	Soluble	Solid	300.0	3070
890-663-8	BH04A	Soluble	Solid	300.0	3070
MB 880-3070/1-A	Method Blank	Soluble	Solid	300.0	3070
LCS 880-3070/2-A	Lab Control Sample	Soluble	Solid	300.0	3070
LCSD 880-3070/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3070
890-663-6 MS	BH03A	Soluble	Solid	300.0	3070
890-663-6 MSD	BH03A	Soluble	Solid	300.0	3070

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Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-663-1
SDG: TE012919259

Client Sample ID: BH01

Lab Sample ID: 890-663-1

Date Collected: 05/11/21 15:10

Matrix: Solid

Date Received: 05/12/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3052	05/13/21 14:00	MR	XM
Total/NA	Analysis	8021B		1	3049	05/13/21 15:18	MR	XM
Total/NA	Prep	8015NM Prep			3064	05/13/21 11:18	AM	XM
Total/NA	Analysis	8015B NM		1	3057	05/13/21 15:14	AJ	XM
Soluble	Leach	DI Leach			3070	05/13/21 14:00	SC	XM
Soluble	Analysis	300.0		1	3078	05/13/21 17:13	SC	XM

Client Sample ID: BH01A

Lab Sample ID: 890-663-2

Date Collected: 05/11/21 15:20

Matrix: Solid

Date Received: 05/12/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3052	05/13/21 14:00	MR	XM
Total/NA	Analysis	8021B		1	3049	05/13/21 15:38	MR	XM
Total/NA	Prep	8015NM Prep			3064	05/13/21 11:18	AM	XM
Total/NA	Analysis	8015B NM		1	3057	05/13/21 15:34	AJ	XM
Soluble	Leach	DI Leach			3070	05/13/21 14:00	SC	XM
Soluble	Analysis	300.0		1	3078	05/13/21 17:18	SC	XM

Client Sample ID: BH02

Lab Sample ID: 890-663-3

Date Collected: 05/11/21 14:20

Matrix: Solid

Date Received: 05/12/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3052	05/13/21 14:00	MR	XM
Total/NA	Analysis	8021B		1	3049	05/13/21 15:58	MR	XM
Total/NA	Prep	8015NM Prep			3064	05/13/21 11:18	AM	XM
Total/NA	Analysis	8015B NM		1	3057	05/13/21 15:55	AJ	XM
Soluble	Leach	DI Leach			3070	05/13/21 14:00	SC	XM
Soluble	Analysis	300.0		1	3078	05/13/21 17:23	SC	XM

Client Sample ID: BH02A

Lab Sample ID: 890-663-4

Date Collected: 05/11/21 14:30

Matrix: Solid

Date Received: 05/12/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3053	05/13/21 14:00	MR	XM
Total/NA	Analysis	8021B		1	3051	05/13/21 14:35	MR	XM
Total/NA	Prep	8015NM Prep			3064	05/13/21 11:18	AM	XM
Total/NA	Analysis	8015B NM		1	3057	05/13/21 16:16	AJ	XM
Soluble	Leach	DI Leach			3070	05/13/21 14:00	SC	XM
Soluble	Analysis	300.0		1	3078	05/13/21 17:28	SC	XM

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1Job ID: 890-663-1
SDG: TE012919259

Client Sample ID: BH03

Lab Sample ID: 890-663-5

Date Collected: 05/11/21 13:45

Matrix: Solid

Date Received: 05/12/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3053	05/13/21 14:00	MR	XM
Total/NA	Analysis	8021B		1	3051	05/13/21 14:59	MR	XM
Total/NA	Prep	8015NM Prep			3064	05/13/21 11:18	AM	XM
Total/NA	Analysis	8015B NM		1	3057	05/13/21 16:36	AJ	XM
Soluble	Leach	DI Leach			3070	05/13/21 14:00	SC	XM
Soluble	Analysis	300.0		5	3078	05/13/21 17:33	SC	XM

Client Sample ID: BH03A

Lab Sample ID: 890-663-6

Date Collected: 05/11/21 14:00

Matrix: Solid

Date Received: 05/12/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3053	05/13/21 14:00	MR	XM
Total/NA	Analysis	8021B		1	3051	05/13/21 15:24	MR	XM
Total/NA	Prep	8015NM Prep			3065	05/13/21 11:33	DM	XM
Total/NA	Analysis	8015B NM		1	3067	05/13/21 15:55	AJ	XM
Soluble	Leach	DI Leach			3070	05/13/21 14:00	SC	XM
Soluble	Analysis	300.0		1	3078	05/13/21 17:39	SC	XM

Client Sample ID: BH04

Lab Sample ID: 890-663-7

Date Collected: 05/10/21 12:45

Matrix: Solid

Date Received: 05/12/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3053	05/13/21 14:00	MR	XM
Total/NA	Analysis	8021B		1	3051	05/13/21 15:49	MR	XM
Total/NA	Prep	8015NM Prep			3065	05/13/21 11:33	DM	XM
Total/NA	Analysis	8015B NM		1	3067	05/13/21 16:16	AJ	XM
Soluble	Leach	DI Leach			3070	05/13/21 14:00	SC	XM
Soluble	Analysis	300.0		1	3078	05/13/21 20:33	SC	XM

Client Sample ID: BH04A

Lab Sample ID: 890-663-8

Date Collected: 05/10/21 13:00

Matrix: Solid

Date Received: 05/12/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3053	05/13/21 14:00	MR	XM
Total/NA	Analysis	8021B		1	3051	05/13/21 16:14	MR	XM
Total/NA	Prep	8015NM Prep			3065	05/13/21 11:33	DM	XM
Total/NA	Analysis	8015B NM		1	3067	05/13/21 16:36	AJ	XM
Soluble	Leach	DI Leach			3070	05/13/21 14:00	SC	XM
Soluble	Analysis	300.0		1	3078	05/13/21 19:07	SC	XM

Laboratory References:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Xenco, Carlsbad

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-663-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-663-1
SDG: TE012919259

Method	Method Description	Protocol	Laboratory
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
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

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:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI1

Job ID: 890-663-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-663-1	BH01	Solid	05/11/21 15:10	05/12/21 16:55	1'
890-663-2	BH01A	Solid	05/11/21 15:20	05/12/21 16:55	4'
890-663-3	BH02	Solid	05/11/21 14:20	05/12/21 16:55	1'
890-663-4	BH02A	Solid	05/11/21 14:30	05/12/21 16:55	4'
890-663-5	BH03	Solid	05/11/21 13:45	05/12/21 16:55	1'
890-663-6	BH03A	Solid	05/11/21 14:00	05/12/21 16:55	4'
890-663-7	BH04	Solid	05/10/21 12:45	05/12/21 16:55	1'
890-663-8	BH04A	Solid	05/10/21 13:00	05/12/21 16:55	4'

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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
 Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)
 Hobbs, NM (575-392-7550)

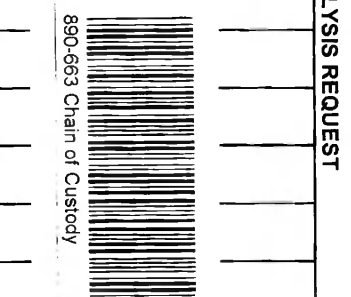
Chain of Custody

Work Order No: _____

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Litrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	bbell@ltenv.com

Program: <input type="checkbox"/> UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project: <input type="checkbox"/> Level II <input type="checkbox"/> Level III <input type="checkbox"/> JST/UST <input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Reporting Level: <input type="checkbox"/> EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: _____

Project Name:	YR001	Turn Around	
Project Number:	TE021925A	Routine	<input type="checkbox"/>
P.O. Number:	2AR-2440	Rush: 24HR	
Sampler's Name:	Benjamin Beill	Due Date:	



ANALYSIS REQUEST

Work Order Notes

Post Receipt: 1082151501

APR 2021 01559 ER01

TAT starts the day received by the lab, if received by 4:30pm

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers			Sample Comments
					TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	
BHD1	S	5/10/21	1510	1'	X	X	X	
BHD1A			1520	4'	X	X	X	
BHD2			1420	1'	X	X	X	
BHD2A			1430	4'	X	X	X	
BHD3			1345	1'	X	X	X	
BHD3A			1400	4'	X	X	X	
BHD4			5/10/21	1'	X	X	X	
BHD4A			1300	4'	X	X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PFM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
 1631 / 245.1 / 7470 / 7471: Hg

Signature of client and relinquinishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
[Signature]	[Signature]	5-12-21 6:55	[Signature]	[Signature]	5-12-21 16:55

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Eurofins Xenco, Carlsbad

1089 N Canal St.
Carlsbad, NM 88220
Phone 575-988-3199 Fax: 575-988-3199

Chain of Custody Record



Environment Testing
America

Client Information (Sub Contract Lab)		Sampler	Lab PM	Carrier Tracking No(s)	COC No:					
Client Contact:	Phone:		Kramer, Jessica		890-216 1					
Shipping/Receiving	E-Mail:		jessica.kramer@eurofins.com	State of Origin:	Page 1 of 1					
Company:			Accreditations Required (See note)	New Mexico	Page 1 of 1					
Eurofins Xenco			NELAP - Louisiana NELAP - Texas		Job #:					
Address:	Due Date Requested				890-663-1					
1211 W. Florida Ave	5/14/2021									
City:	TAT Requested (days)									
Midland										
State Zip										
TX, 79701										
Phone:	PO #:									
432-704-5440 (Tel)										
Email:	WOC #:									
Project Name:	Project #:									
JRU D11	89000004									
Site:	SSOW#:									
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=soil, BT=Issue, AA=)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of containers	Special Instructions/Note
BH01 (890-663-1)	5/11/21	15 10	Mountain	Solid		X	X	X		
BH01A (890-663-2)	5/11/21	15 20	Mountain	Solid		X	X	X		
BH02 (890-663-3)	5/11/21	14 20	Mountain	Solid		X	X	X		
BH02A (890-663-4)	5/11/21	14 30	Mountain	Solid		X	X	X		
BH03 (890-663-5)	5/11/21	13 45	Mountain	Solid		X	X	X		
BH03A (890-663-6)	5/11/21	14 00	Mountain	Solid		X	X	X		
BH04 (890-663-7)	5/10/21	12 45	Mountain	Solid		X	X	X		
BH04A (890-663-8)	5/10/21	13 00	Mountain	Solid		X	X	X		

Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.

Possible Hazard Identification
Unconfirmed

Deliverable Requested I II III IV, Other (Specify) _____ Primary Deliverable Rank 2

Special Instructions/QC Requirements: _____

Empty Kit Relinquished by _____ Date _____ Time _____ Method of Shipment: _____

Relinquished by *Cue Giff* Date/Time *5.13.21* Company _____

Relinquished by _____ Date/Time _____ Company _____

Relinquished by _____ Date/Time _____ Company _____

Custody Seals Intact: Yes No Custody Seal No _____

Cooler Temperature(s) °C and Other Remarks _____

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months



Environment Testing
America

ANALYTICAL REPORT

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-680-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI 1

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Dan Moir

Authorized for release by:
5/19/2021 8:06:58 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com



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www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: WSP USA Inc.
Project/Site: JRU DI 1

Laboratory Job ID: 890-680-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-680-1
SDG: TE012919259

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-680-1
SDG: TE012919259

Job ID: 890-680-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-680-1

Comments

No additional comments.

Receipt

The samples were received on 5/17/2021 4:40 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 was 3.8° C.

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: SS07A (890-680-1), SS07B (890-680-2), SS09A (890-680-3) and SS09B (890-680-4).

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-3194 and analytical batch 880-3197 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method 8015B NM: Manual integration was performed on the following samples: SS07A (890-680-1), SS07B (890-680-2) and SS09A (890-680-3). The oil range detections in these samples was the result of baseline rise and was not an actual indication of oil range hydrocarbons.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-680-1
SDG: TE012919259

Client Sample ID: SS07A

Lab Sample ID: 890-680-1

Date Collected: 05/14/21 09:30

Matrix: Solid

Date Received: 05/17/21 16:40

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/18/21 14:00	05/18/21 15:04	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/18/21 14:00	05/18/21 15:04	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/18/21 14:00	05/18/21 15:04	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		05/18/21 14:00	05/18/21 15:04	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/18/21 14:00	05/18/21 15:04	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		05/18/21 14:00	05/18/21 15:04	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		05/18/21 14:00	05/18/21 15:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	05/18/21 14:00	05/18/21 15:04	1
1,4-Difluorobenzene (Surr)	99		70 - 130	05/18/21 14:00	05/18/21 15:04	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/18/21 11:59	05/18/21 19:07	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/18/21 11:59	05/18/21 19:07	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/18/21 11:59	05/18/21 19:07	1
Total TPH	<49.9	U	49.9	mg/Kg		05/18/21 11:59	05/18/21 19:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	05/18/21 11:59	05/18/21 19:07	1
o-Terphenyl	100		70 - 130	05/18/21 11:59	05/18/21 19:07	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	39.6	F1	24.8	mg/Kg			05/19/21 15:46	5

Client Sample ID: SS07B

Lab Sample ID: 890-680-2

Date Collected: 05/14/21 09:45

Matrix: Solid

Date Received: 05/17/21 16:40

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/18/21 14:00	05/18/21 15:24	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/18/21 14:00	05/18/21 15:24	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/18/21 14:00	05/18/21 15:24	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		05/18/21 14:00	05/18/21 15:24	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/18/21 14:00	05/18/21 15:24	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		05/18/21 14:00	05/18/21 15:24	1
Total BTEX	<0.00404	U	0.00404	mg/Kg		05/18/21 14:00	05/18/21 15:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130	05/18/21 14:00	05/18/21 15:24	1
1,4-Difluorobenzene (Surr)	100		70 - 130	05/18/21 14:00	05/18/21 15:24	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-680-1
SDG: TE012919259

Client Sample ID: SS07B

Lab Sample ID: 890-680-2

Date Collected: 05/14/21 09:45

Matrix: Solid

Date Received: 05/17/21 16:40

Sample Depth: - 4

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/18/21 11:59	05/18/21 19:29	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/18/21 11:59	05/18/21 19:29	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/18/21 11:59	05/18/21 19:29	1
Total TPH	<49.9	U	49.9	mg/Kg		05/18/21 11:59	05/18/21 19:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130	05/18/21 11:59	05/18/21 19:29	1
o-Terphenyl	102		70 - 130	05/18/21 11:59	05/18/21 19:29	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	126		24.9	mg/Kg			05/19/21 16:02	5

Client Sample ID: SS09A

Lab Sample ID: 890-680-3

Date Collected: 05/14/21 10:00

Matrix: Solid

Date Received: 05/17/21 16:40

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 14:00	05/18/21 15:44	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 14:00	05/18/21 15:44	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 14:00	05/18/21 15:44	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		05/18/21 14:00	05/18/21 15:44	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 14:00	05/18/21 15:44	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		05/18/21 14:00	05/18/21 15:44	1
Total BTEX	<0.00401	U	0.00401	mg/Kg		05/18/21 14:00	05/18/21 15:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	05/18/21 14:00	05/18/21 15:44	1
1,4-Difluorobenzene (Surr)	99		70 - 130	05/18/21 14:00	05/18/21 15:44	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/18/21 11:59	05/18/21 19:50	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/18/21 11:59	05/18/21 19:50	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/18/21 11:59	05/18/21 19:50	1
Total TPH	<49.9	U	49.9	mg/Kg		05/18/21 11:59	05/18/21 19:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	05/18/21 11:59	05/18/21 19:50	1
o-Terphenyl	101		70 - 130	05/18/21 11:59	05/18/21 19:50	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.11		5.00	mg/Kg			05/19/21 16:07	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-680-1
SDG: TE012919259

Client Sample ID: SS09B

Lab Sample ID: 890-680-4

Date Collected: 05/14/21 10:20

Matrix: Solid

Date Received: 05/17/21 16:40

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 14:00	05/18/21 16:05	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 14:00	05/18/21 16:05	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 14:00	05/18/21 16:05	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/18/21 14:00	05/18/21 16:05	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 14:00	05/18/21 16:05	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/18/21 14:00	05/18/21 16:05	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/18/21 14:00	05/18/21 16:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	05/18/21 14:00	05/18/21 16:05	1
1,4-Difluorobenzene (Surr)	95		70 - 130	05/18/21 14:00	05/18/21 16:05	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/18/21 11:59	05/18/21 20:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/18/21 11:59	05/18/21 20:12	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/18/21 11:59	05/18/21 20:12	1
Total TPH	<50.0	U	50.0	mg/Kg		05/18/21 11:59	05/18/21 20:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130	05/18/21 11:59	05/18/21 20:12	1
o-Terphenyl	102		70 - 130	05/18/21 11:59	05/18/21 20:12	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.5		4.99	mg/Kg			05/19/21 16:13	1

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-680-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-680-1	SS07A	112	99
890-680-2	SS07B	110	100
890-680-3	SS09A	113	99
890-680-4	SS09B	111	95
LCS 880-3194/1-A	Lab Control Sample	102	96
LCSD 880-3194/2-A	Lab Control Sample Dup	102	97
MB 880-3194/5-A	Method Blank	107	91

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
890-680-1	SS07A	97	100
890-680-2	SS07B	99	102
890-680-3	SS09A	96	101
890-680-4	SS09B	98	102
LCS 880-3210/2-A	Lab Control Sample	102	98
LCSD 880-3210/3-A	Lab Control Sample Dup	105	97
MB 880-3210/1-A	Method Blank	112	105

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-680-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3194/5-A
Matrix: Solid
Analysis Batch: 3197

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3194

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:35	05/18/21 13:13	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:35	05/18/21 13:13	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:35	05/18/21 13:13	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/18/21 08:35	05/18/21 13:13	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:35	05/18/21 13:13	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/18/21 08:35	05/18/21 13:13	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/18/21 08:35	05/18/21 13:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	05/18/21 08:35	05/18/21 13:13	1
1,4-Difluorobenzene (Surr)	91		70 - 130	05/18/21 08:35	05/18/21 13:13	1

Lab Sample ID: LCS 880-3194/1-A
Matrix: Solid
Analysis Batch: 3197

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3194

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07243		mg/Kg		72	70 - 130
Toluene	0.100	0.08903		mg/Kg		89	70 - 130
Ethylbenzene	0.100	0.09700		mg/Kg		97	70 - 130
m-Xylene & p-Xylene	0.200	0.1973		mg/Kg		99	70 - 130
o-Xylene	0.100	0.09996		mg/Kg		100	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: LCSD 880-3194/2-A
Matrix: Solid
Analysis Batch: 3197

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3194

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.07261		mg/Kg		73	70 - 130	0	35
Toluene	0.100	0.08635		mg/Kg		86	70 - 130	3	35
Ethylbenzene	0.100	0.09331		mg/Kg		93	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.1892		mg/Kg		95	70 - 130	4	35
o-Xylene	0.100	0.09680		mg/Kg		97	70 - 130	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-680-1
SDG: TE012919259

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-3210/1-A
Matrix: Solid
Analysis Batch: 3205

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3210

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/18/21 11:59	05/18/21 12:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/18/21 11:59	05/18/21 12:58	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/18/21 11:59	05/18/21 12:58	1
Total TPH	<50.0	U	50.0	mg/Kg		05/18/21 11:59	05/18/21 12:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130	05/18/21 11:59	05/18/21 12:58	1
o-Terphenyl	105		70 - 130	05/18/21 11:59	05/18/21 12:58	1

Lab Sample ID: LCS 880-3210/2-A
Matrix: Solid
Analysis Batch: 3205

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3210

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	873.5		mg/Kg		87	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1084		mg/Kg		108	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: LCSD 880-3210/3-A
Matrix: Solid
Analysis Batch: 3205

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3210

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	900.4		mg/Kg		90	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	1097		mg/Kg		110	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	97		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3229/1-A
Matrix: Solid
Analysis Batch: 3252

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/19/21 15:29	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-680-1
SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3229/2-A
Matrix: Solid
Analysis Batch: 3252

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	253.8		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-3229/3-A
Matrix: Solid
Analysis Batch: 3252

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	254.3		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-680-1 MS
Matrix: Solid
Analysis Batch: 3252

Client Sample ID: SS07A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	39.6	F1	248	1227	F1	mg/Kg		479	90 - 110

Lab Sample ID: 890-680-1 MSD
Matrix: Solid
Analysis Batch: 3252

Client Sample ID: SS07A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	39.6	F1	248	1232	F1	mg/Kg		481	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-680-1
SDG: TE012919259

GC VOA

Prep Batch: 3194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-680-1	SS07A	Total/NA	Solid	5035	
890-680-2	SS07B	Total/NA	Solid	5035	
890-680-3	SS09A	Total/NA	Solid	5035	
890-680-4	SS09B	Total/NA	Solid	5035	
MB 880-3194/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3194/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3194/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-680-1	SS07A	Total/NA	Solid	8021B	3194
890-680-2	SS07B	Total/NA	Solid	8021B	3194
890-680-3	SS09A	Total/NA	Solid	8021B	3194
890-680-4	SS09B	Total/NA	Solid	8021B	3194
MB 880-3194/5-A	Method Blank	Total/NA	Solid	8021B	3194
LCS 880-3194/1-A	Lab Control Sample	Total/NA	Solid	8021B	3194
LCSD 880-3194/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3194

GC Semi VOA

Analysis Batch: 3205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-680-1	SS07A	Total/NA	Solid	8015B NM	3210
890-680-2	SS07B	Total/NA	Solid	8015B NM	3210
890-680-3	SS09A	Total/NA	Solid	8015B NM	3210
890-680-4	SS09B	Total/NA	Solid	8015B NM	3210
MB 880-3210/1-A	Method Blank	Total/NA	Solid	8015B NM	3210
LCS 880-3210/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3210
LCSD 880-3210/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3210

Prep Batch: 3210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-680-1	SS07A	Total/NA	Solid	8015NM Prep	
890-680-2	SS07B	Total/NA	Solid	8015NM Prep	
890-680-3	SS09A	Total/NA	Solid	8015NM Prep	
890-680-4	SS09B	Total/NA	Solid	8015NM Prep	
MB 880-3210/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3210/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3210/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 3229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-680-1	SS07A	Soluble	Solid	DI Leach	
890-680-2	SS07B	Soluble	Solid	DI Leach	
890-680-3	SS09A	Soluble	Solid	DI Leach	
890-680-4	SS09B	Soluble	Solid	DI Leach	
MB 880-3229/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-680-1 MS	SS07A	Soluble	Solid	DI Leach	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-680-1
SDG: TE012919259

HPLC/IC (Continued)

Leach Batch: 3229 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-680-1 MSD	SS07A	Soluble	Solid	DI Leach	

Analysis Batch: 3252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-680-1	SS07A	Soluble	Solid	300.0	3229
890-680-2	SS07B	Soluble	Solid	300.0	3229
890-680-3	SS09A	Soluble	Solid	300.0	3229
890-680-4	SS09B	Soluble	Solid	300.0	3229
MB 880-3229/1-A	Method Blank	Soluble	Solid	300.0	3229
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	300.0	3229
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3229
890-680-1 MS	SS07A	Soluble	Solid	300.0	3229
890-680-1 MSD	SS07A	Soluble	Solid	300.0	3229

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1Job ID: 890-680-1
SDG: TE012919259**Client Sample ID: SS07A****Date Collected: 05/14/21 09:30****Date Received: 05/17/21 16:40****Lab Sample ID: 890-680-1****Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3194	05/18/21 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	3197	05/18/21 15:04	MR	XEN MID
Total/NA	Prep	8015NM Prep			3210	05/18/21 11:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3205	05/18/21 19:07	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		5	3252	05/19/21 15:46	CH	XEN MID

Client Sample ID: SS07B**Date Collected: 05/14/21 09:45****Date Received: 05/17/21 16:40****Lab Sample ID: 890-680-2****Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3194	05/18/21 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	3197	05/18/21 15:24	MR	XEN MID
Total/NA	Prep	8015NM Prep			3210	05/18/21 11:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3205	05/18/21 19:29	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		5	3252	05/19/21 16:02	CH	XEN MID

Client Sample ID: SS09A**Date Collected: 05/14/21 10:00****Date Received: 05/17/21 16:40****Lab Sample ID: 890-680-3****Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3194	05/18/21 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	3197	05/18/21 15:44	MR	XEN MID
Total/NA	Prep	8015NM Prep			3210	05/18/21 11:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3205	05/18/21 19:50	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		1	3252	05/19/21 16:07	CH	XEN MID

Client Sample ID: SS09B**Date Collected: 05/14/21 10:20****Date Received: 05/17/21 16:40****Lab Sample ID: 890-680-4****Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3194	05/18/21 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	3197	05/18/21 16:05	MR	XEN MID
Total/NA	Prep	8015NM Prep			3210	05/18/21 11:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3205	05/18/21 20:12	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		1	3252	05/19/21 16:13	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Xenco, Carlsbad

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-680-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-680-1
SDG: TE012919259

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



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-680-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-680-1	SS07A	Solid	05/14/21 09:30	05/17/21 16:40	- 1
890-680-2	SS07B	Solid	05/14/21 09:45	05/17/21 16:40	- 4
890-680-3	SS09A	Solid	05/14/21 10:00	05/17/21 16:40	- 1
890-680-4	SS09B	Solid	05/14/21 10:20	05/17/21 16:40	- 4

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Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432-704-5440) El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

Chain of Custody

Work Order No: _____

www.xenco.com

Page _____

of _____

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432-236-3849	Email:	bbellill@ltenv.com

Program: UST/PST	<input type="checkbox"/>	PRP	<input type="checkbox"/>	Brownfields	<input type="checkbox"/>	RC	<input type="checkbox"/>	Superfund	<input type="checkbox"/>
State of Project:									
Reporting Level II	<input type="checkbox"/>	Level III	<input type="checkbox"/>	ST/UST	<input type="checkbox"/>	RRP	<input type="checkbox"/>	Level IV	<input type="checkbox"/>
Deliverables: EDD	<input type="checkbox"/>	ADAPT	<input type="checkbox"/>	Other:					

Project Name:	FRUDDI 1	Turn Around	
Project Number:	TE012914254	Routine	<input type="checkbox"/>
P.O. Number:	NBM2002747253	Rush: 24 HR	
Sampler's Name:	Benjamin Bellill	Due Date:	



890-680 Chain of Custody

Temperature (°C):	9.0/3.8	Temp Blank:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Wet Ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Received Intact:	Yes	No		Thermometer ID	
Cooler Custody Seals:	Yes	No	MA	Correction Factor:	-0.2
Sample Custody Seals:	Yes	No	N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers			ANALYSIS REQUEST			Work Order Notes	
					TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)					
SS074	S	5/14/21	0930	1'	✓	✓	✓					
SS078	S	5/14/21	0945	4'	✓	✓	✓					
SS094	S	5/14/21	1000	1'	✓	✓	✓					
SS098	S	5/14/21	1020	4'	✓	✓	✓					

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	5/17/21 @ 1640			

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Chain of Custody Record



Environment Testing
America

1089 N Canal St.
Carlsbad NM 86220
Phone 575-988-3199 Fax: 575-988-3199

Client Information (Sub Contract Lab)

Client Contact:
Shipping/Receiving:
Company: Eurofins Xeno

Sampler:
Phone:
Due Date Requested: 5/19/2021

Lab PM: Kramer, Jessica
E-Mail: jessica.kramer@eurofinsnet.com

Carrier Tracking No(s):
State of Origin: New Mexico

COC No: 890-220-1
Page: 1 of 1

Address: 1211 W. Florida Ave
City: Midland
State/Zip: TX, 79701
Phone: 432-704-5440(Tel)
Email:
Project Name: JRU DI 1
Site:
SSOV#: 89000004

Accreditations Required (See note): NELAP - Louisiana NELAP - Texas

Job #: 890-680-1

TAT Requested (days):

Analysis Requested

Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=variable)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of containers	Special Instructions/Note
--------------------	-------------	-------------	------------------------------	---------------------------------------	-----------------------------------	----------------------------	--------------------	----------------------------	---------------------------

SS07A (890-680-1)	5/14/21	09:30	Mountain	Solid	X	X	8015MOD_NM/8015NM_S_Prep Full TPH	1	
SS07B (890-680-2)	5/14/21	09:45	Mountain	Solid	X	X	300_ORGFM_28D/DI_LEACH Chloride	1	
SS09A (890-680-3)	5/14/21	10:00	Mountain	Solid	X	X	8021B/6035FP_Calc BTEX	1	
SS09B (890-680-4)	5/14/21	10:20	Mountain	Solid	X	X		1	

Note: Since laboratory accreditations are subject to change, Eurofins Xeno LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the Eurofins Xeno LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xeno LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xeno LLC.

Possible Hazard Identification

Unconfirmed
Deliverable Requested: I II III IV, Other (specify) Primary Deliverable Rank 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Empty Kit Relinquished by: _____ Date: _____ Method of Shipment: _____

Relinquished by: *Che [Signature]* Date/Time: 5.18.21 Company: _____ Received by: *[Signature]* Date/Time: 5-18-21 Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____ Received by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No Custody Seal No: _____ Coder Temperature(s) °C and Other Remarks: _____



Environment Testing
America

ANALYTICAL REPORT

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-683-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI I Combined

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Dan Moir

Authorized for release by:
5/19/2021 8:08:33 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com



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www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Laboratory Job ID: 890-683-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-683-1
SDG: TE012919259

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high 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
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-683-1
SDG: TE012919259

Job ID: 890-683-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

**Job Narrative
890-683-1**

Receipt

The sample was received on 5/18/2021 3:04 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

GC VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

Method 8015MOD_NM: The continuing calibration verification (CCV) associated with batch 880-3220 recovered above the upper control limit for Diesel Range Organics (Over C10-C28) and Gasoline Range Organics (GRO)-C6-C10. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

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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Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-683-1
SDG: TE012919259

Client Sample ID: FS03

Lab Sample ID: 890-683-1

Date Collected: 05/17/21 11:30

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: 8'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/19/21 12:00	05/19/21 14:50	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/19/21 12:00	05/19/21 14:50	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/19/21 12:00	05/19/21 14:50	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/19/21 12:00	05/19/21 14:50	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/19/21 12:00	05/19/21 14:50	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/19/21 12:00	05/19/21 14:50	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/19/21 12:00	05/19/21 14:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	05/19/21 12:00	05/19/21 14:50	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/19/21 12:00	05/19/21 14:50	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 10:30	05/19/21 15:41	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/19/21 10:30	05/19/21 15:41	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 10:30	05/19/21 15:41	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 10:30	05/19/21 15:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	125		70 - 130	05/19/21 10:30	05/19/21 15:41	1
o-Terphenyl	145	S1+	70 - 130	05/19/21 10:30	05/19/21 15:41	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	522		24.8	mg/Kg			05/19/21 16:18	5

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-683-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-683-1	FS03	92	98
LCS 880-3212/1-A	Lab Control Sample	109	101
MB 880-3212/5-A	Method Blank	88	94

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1	DFBZ1
LCSD 880-3212/2-A	Lab Control Sample Dup		

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-683-1	FS03	125	145 S1+
LCS 880-3219/2-A	Lab Control Sample	105	103
LCSD 880-3219/3-A	Lab Control Sample Dup	106	113
MB 880-3219/1-A	Method Blank	110	129

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-683-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3212/5-A
Matrix: Solid
Analysis Batch: 3218

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3212

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/19/21 09:00	05/19/21 11:30	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	88		70 - 130	05/19/21 09:00	05/19/21 11:30	1
1,4-Difluorobenzene (Surr)	94		70 - 130	05/19/21 09:00	05/19/21 11:30	1

Lab Sample ID: LCS 880-3212/1-A
Matrix: Solid
Analysis Batch: 3218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3212

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Benzene	0.100	0.07738		mg/Kg		77	70 - 130
Toluene	0.100	0.08113		mg/Kg		81	70 - 130
Ethylbenzene	0.100	0.09084		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	0.200	0.1903		mg/Kg		95	70 - 130
o-Xylene	0.100	0.09828		mg/Kg		98	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: LCSD 880-3212/2-A
Matrix: Solid
Analysis Batch: 3218

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3212

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec. Limits	RPD	
		Result	Qualifier					RPD	Limit
Benzene	0.100	0.07397		mg/Kg					
Toluene	0.100	0.07950		mg/Kg					
Ethylbenzene	0.100	0.09287		mg/Kg					
m-Xylene & p-Xylene	0.200	0.1968		mg/Kg					
o-Xylene	0.100	0.1026		mg/Kg					

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)			
1,4-Difluorobenzene (Surr)			

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-683-1
SDG: TE012919259

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-3219/1-A
Matrix: Solid
Analysis Batch: 3220

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3219

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 10:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 10:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 10:13	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 10:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130	05/19/21 08:36	05/19/21 10:13	1
o-Terphenyl	129		70 - 130	05/19/21 08:36	05/19/21 10:13	1

Lab Sample ID: LCS 880-3219/2-A
Matrix: Solid
Analysis Batch: 3220

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3219

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	970.2		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1191		mg/Kg		119	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: LCSD 880-3219/3-A
Matrix: Solid
Analysis Batch: 3220

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3219

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	995.0		mg/Kg		99	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	1250		mg/Kg		125	70 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	113		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3229/1-A
Matrix: Solid
Analysis Batch: 3252

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/19/21 15:29	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI I Combined

Job ID: 890-683-1
 SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3229/2-A
 Matrix: Solid
 Analysis Batch: 3252

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	253.8		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-3229/3-A
 Matrix: Solid
 Analysis Batch: 3252

Client Sample ID: Lab Control Sample Dup
 Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	254.3		mg/Kg		102	90 - 110	0	20

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-683-1
SDG: TE012919259

GC VOA

Prep Batch: 3212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-683-1	FS03	Total/NA	Solid	5035	
MB 880-3212/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3212/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3212/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-683-1	FS03	Total/NA	Solid	8021B	3212
MB 880-3212/5-A	Method Blank	Total/NA	Solid	8021B	3212
LCS 880-3212/1-A	Lab Control Sample	Total/NA	Solid	8021B	3212
LCSD 880-3212/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3212

GC Semi VOA

Prep Batch: 3219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-683-1	FS03	Total/NA	Solid	8015NM Prep	
MB 880-3219/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3219/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3219/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-683-1	FS03	Total/NA	Solid	8015B NM	3219
MB 880-3219/1-A	Method Blank	Total/NA	Solid	8015B NM	3219
LCS 880-3219/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3219
LCSD 880-3219/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3219

HPLC/IC

Leach Batch: 3229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-683-1	FS03	Soluble	Solid	DI Leach	
MB 880-3229/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 3252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-683-1	FS03	Soluble	Solid	300.0	3229
MB 880-3229/1-A	Method Blank	Soluble	Solid	300.0	3229
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	300.0	3229
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3229

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-683-1
SDG: TE012919259

Client Sample ID: FS03

Lab Sample ID: 890-683-1

Date Collected: 05/17/21 11:30

Matrix: Solid

Date Received: 05/18/21 15:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3212	05/19/21 12:00	KL	XEN MID
Total/NA	Analysis	8021B		1	3218	05/19/21 14:50	KL	XEN MID
Total/NA	Prep	8015NM Prep			3219	05/19/21 10:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3220	05/19/21 15:41	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		5	3252	05/19/21 16:18	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-683-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-683-1
SDG: TE012919259

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



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-683-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-683-1	FS03	Solid	05/17/21 11:30	05/18/21 15:04	8'

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Environment Testing
Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: _____

www.xenco.com Page _____ of _____

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTELL
Company Name:	WSP USA	Company Name:	XTD ENERGY
Address:	3300 N A ST	Address:	5101 E GREENE ST
City, State ZIP:	MIDLAND, TX 79705	City, State ZIP:	CARLSBAD, NM 88224
Phone:	(505) 702-2329	Email:	anna.bryers@wsp.com

Work Order Comments	
Program: UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>	
State of Project:	
Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>	
Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:	

Project Name:	JRU DIE 1 Combined	Turn Around	
Project Number:	TEP22A192 SA	<input type="checkbox"/> Routine <input checked="" type="checkbox"/> Rush	Pres. Code
Project Location:	EDDY COUNTY	Due Date: Same day	
Sampler's Name:	ANNA BRYERS	TRT starts the day received by the lab, if received by 4:30pm	
PO #:	920-2267	Temp Blank: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Wet Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
SAMPLE RECEIPT		Thermometer ID: JMW-807	Parameters
Samples Received Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Correction Factor: -0.3	TPH (EPA 8215 mod)
Cooler Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Temperature Reading: 1.7/1.2	BTEX (EPA 821 B)
Sample Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Corrected Temperature:	Chloride (EPA 348.0)
Total Containers:			



890-683 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab Comp	# of Cont	ANALYSIS REQUEST	Preservative Codes	Sample Comments
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ESP 3	S	5/17/21	1130P	8' Comp	1	1	X	None: NO Cool: Cool HCL: HC H ₂ SO ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₅ : NaSO ₅ Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAPC	ACE: EW 2021 01559 EXP 01 COST CENTRE: 1082151801
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Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Tl Sn U V Zn
 Character Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins 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 Eurofins Xenco. A minimum charge of \$86.00 will be applied to each project and a charge of \$8 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		5-18-21 1504 ^h			

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-683-1
SDG Number: TE012919259

Login Number: 683
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-683-1
SDG Number: TE012919259

Login Number: 683
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Xenco, Midland
List Creation: 05/19/21 02:29 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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Environment Testing
America

ANALYTICAL REPORT

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-687-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI I Combined

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Dan Moir

Authorized for release by:
5/19/2021 8:38:29 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com



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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Laboratory Job ID: 890-687-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-687-1
SDG: TE012919259

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-687-1
SDG: TE012919259

Job ID: 890-687-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-687-1

Comments

No additional comments.

Receipt

The sample was received on 5/18/2021 3:04 PM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.2° C.

GC VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

Method 8015B NM: The continuing calibration verification (CCV) associated with batch 880-3220 recovered above the upper control limit for Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28) The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Client Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI I Combined

Job ID: 890-687-1
 SDG: TE012919259

Client Sample ID: SW06

Lab Sample ID: 890-687-1

Date Collected: 05/17/21 11:00

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: 0 - 8'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/19/21 12:00	05/19/21 15:51	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/19/21 12:00	05/19/21 15:51	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/19/21 12:00	05/19/21 15:51	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/19/21 12:00	05/19/21 15:51	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/19/21 12:00	05/19/21 15:51	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/19/21 12:00	05/19/21 15:51	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/19/21 12:00	05/19/21 15:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130	05/19/21 12:00	05/19/21 15:51	1
1,4-Difluorobenzene (Surr)	96		70 - 130	05/19/21 12:00	05/19/21 15:51	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 10:30	05/19/21 17:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/21 10:30	05/19/21 17:40	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 10:30	05/19/21 17:40	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 10:30	05/19/21 17:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	05/19/21 10:30	05/19/21 17:40	1
o-Terphenyl	110		70 - 130	05/19/21 10:30	05/19/21 17:40	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20.6		5.02	mg/Kg			05/19/21 17:16	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-687-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-687-1	SW06	91	96
LCS 880-3212/1-A	Lab Control Sample	109	101
MB 880-3212/5-A	Method Blank	88	94

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
LCSD 880-3212/2-A	Lab Control Sample Dup		

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
890-687-1	SW06	103	110
LCS 880-3219/2-A	Lab Control Sample	105	103
LCSD 880-3219/3-A	Lab Control Sample Dup	106	113
MB 880-3219/1-A	Method Blank	110	129

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-687-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3212/5-A
Matrix: Solid
Analysis Batch: 3218

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3212

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/19/21 09:00	05/19/21 11:30	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	88		70 - 130	05/19/21 09:00	05/19/21 11:30	1
1,4-Difluorobenzene (Surr)	94		70 - 130	05/19/21 09:00	05/19/21 11:30	1

Lab Sample ID: LCS 880-3212/1-A
Matrix: Solid
Analysis Batch: 3218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3212

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Benzene	0.100	0.07738		mg/Kg		77	70 - 130
Toluene	0.100	0.08113		mg/Kg		81	70 - 130
Ethylbenzene	0.100	0.09084		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	0.200	0.1903		mg/Kg		95	70 - 130
o-Xylene	0.100	0.09828		mg/Kg		98	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: LCSD 880-3212/2-A
Matrix: Solid
Analysis Batch: 3218

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3212

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec. Limits	RPD	
		Result	Qualifier					RPD	Limit
Benzene	0.100	0.07397		mg/Kg					
Toluene	0.100	0.07950		mg/Kg					
Ethylbenzene	0.100	0.09287		mg/Kg					
m-Xylene & p-Xylene	0.200	0.1968		mg/Kg					
o-Xylene	0.100	0.1026		mg/Kg					

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)			
1,4-Difluorobenzene (Surr)			

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-687-1
SDG: TE012919259

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-3219/1-A
Matrix: Solid
Analysis Batch: 3220

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3219

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 10:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 10:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 10:13	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 10:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130	05/19/21 08:36	05/19/21 10:13	1
o-Terphenyl	129		70 - 130	05/19/21 08:36	05/19/21 10:13	1

Lab Sample ID: LCS 880-3219/2-A
Matrix: Solid
Analysis Batch: 3220

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3219

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	970.2		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1191		mg/Kg		119	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: LCSD 880-3219/3-A
Matrix: Solid
Analysis Batch: 3220

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3219

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	995.0		mg/Kg		99	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	1250		mg/Kg		125	70 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	113		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3229/1-A
Matrix: Solid
Analysis Batch: 3252

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/19/21 15:29	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI I Combined

Job ID: 890-687-1
 SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3229/2-A
 Matrix: Solid
 Analysis Batch: 3252

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	253.8		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-3229/3-A
 Matrix: Solid
 Analysis Batch: 3252

Client Sample ID: Lab Control Sample Dup
 Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	254.3		mg/Kg		102	90 - 110	0	20

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-687-1
SDG: TE012919259

GC VOA

Prep Batch: 3212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-687-1	SW06	Total/NA	Solid	5035	
MB 880-3212/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3212/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3212/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-687-1	SW06	Total/NA	Solid	8021B	3212
MB 880-3212/5-A	Method Blank	Total/NA	Solid	8021B	3212
LCS 880-3212/1-A	Lab Control Sample	Total/NA	Solid	8021B	3212
LCSD 880-3212/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3212

GC Semi VOA

Prep Batch: 3219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-687-1	SW06	Total/NA	Solid	8015NM Prep	
MB 880-3219/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3219/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3219/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-687-1	SW06	Total/NA	Solid	8015B NM	3219
MB 880-3219/1-A	Method Blank	Total/NA	Solid	8015B NM	3219
LCS 880-3219/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3219
LCSD 880-3219/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3219

HPLC/IC

Leach Batch: 3229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-687-1	SW06	Soluble	Solid	DI Leach	
MB 880-3229/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 3252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-687-1	SW06	Soluble	Solid	300.0	3229
MB 880-3229/1-A	Method Blank	Soluble	Solid	300.0	3229
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	300.0	3229
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3229

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-687-1
SDG: TE012919259

Client Sample ID: SW06

Lab Sample ID: 890-687-1

Date Collected: 05/17/21 11:00

Matrix: Solid

Date Received: 05/18/21 15:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3212	05/19/21 12:00	KL	XEN MID
Total/NA	Analysis	8021B		1	3218	05/19/21 15:51	KL	XEN MID
Total/NA	Prep	8015NM Prep			3219	05/19/21 10:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3220	05/19/21 17:40	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		1	3252	05/19/21 17:16	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-687-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-687-1
SDG: TE012919259

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

Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-687-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-687-1	SW06	Solid	05/17/21 11:00	05/18/21 15:04	0 - 8'

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Eurofins Xenco, Carlsbad

1089 N Canal St
Carlsbad NM 88220
Phone 575-988-3199 Fax 575-988-3199

Chain of Custody Record



Environment Testing
America

Client Information (Sub Contract Lab)		Sampler	Lab PM	Carrier Tracking No(s)		COC No
Client Contact: Shipping/Receiving		Phone:	Kramer Jessica	State of Origin:		890-223-1
Company: Eurofins Xenco		E-Mail:	jessica.kramer@eurofinsnet.com	New Mexico		Page 1 of 1
Address: 1211 W Florida Ave		Due Date Requested	5/20/2021	Accreditations Required (See note)		Job #
City: Midland		TAT Requested (days)		NELAP - Louisiana, NELAP - Texas		890-687-1
State, Zip: TX, 79701		Analysis Requested				
Phone: 432-704-5440(Tel)						
Email: W/O #						
Project Name: JRO DI Combined						
Site: SSOV#:		Project #:	89000004	Preservation Codes A HCL M Hexane B NaOH N None C Zn Acetate O AsH ₂ O ₂ D Nitric Acid P Na ₂ O ₄ S E NaHSO ₄ Q Na ₂ SO ₃ F MeOH R Na ₂ S ₂ O ₃ G Ammonia S H ₂ SO ₄ H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Z other (specify) Other:		
Sample Identification - Client ID (Lab ID)		Sample Date	5/17/21			
Sample Time		11 00				
Sample Type (C=Comp, G=grab)		Mountain				
Matrix (W=water, S=solid, O=wash/dil, B=trace anal)		Preservation Code:	Solid	Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>		
Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/>		8015MOD_NM/8015NM_S_Prep Full TPH		8021B/6035FP_Calc BTEX		
Total Number of containers		1		Special Instructions/Note:		
<p>Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/reanalysis being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC</p> <p>Possible Hazard Identification</p> <p>Unconfirmed Deliverable Requested I, II, III, IV Other (Specify) Primary Deliverable Rank 2</p> <p>Special Instructions/QC Requirements</p> <p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p> <p>Empty Kit Relinquished by _____ Date _____</p> <p>Reinquired by: <i>Due Date 5.18.21</i> Date/Time: _____ Company: _____</p> <p>Reinquired by: _____ Date/Time: _____ Company: _____</p> <p>Custody Seals Intact: _____ Custody Seal No _____</p> <p>Coder Temperature(s) °C and Other Remarks: _____</p>						

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-687-1
SDG Number: TE012919259

Login Number: 687
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-687-1
SDG Number: TE012919259

Login Number: 687
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Xenco, Midland
List Creation: 05/19/21 02:27 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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Environment Testing
America

ANALYTICAL REPORT

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-688-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI I Combined

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Dan Moir

Authorized for release by:
5/19/2021 8:15:48 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com



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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Laboratory Job ID: 890-688-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-688-1
SDG: TE012919259

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high 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
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-688-1
SDG: TE012919259

Job ID: 890-688-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-688-1

Receipt

The sample was received on 5/18/2021 3:04 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: SW05 (890-688-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

Method 8015MOD_NM: The continuing calibration verification (CCV) associated with batch 880-3220 recovered above the upper control limit for Diesel Range Organics (Over C10-C28) and Gasoline Range Organics (GRO)-C6-C10. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

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: JRU DI I Combined

Job ID: 890-688-1
SDG: TE012919259

Client Sample ID: SW05

Lab Sample ID: 890-688-1

Date Collected: 05/17/21 10:55

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: 0 - 8

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/21 12:00	05/19/21 16:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/21 12:00	05/19/21 16:12	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/21 12:00	05/19/21 16:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/19/21 12:00	05/19/21 16:12	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/21 12:00	05/19/21 16:12	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/19/21 12:00	05/19/21 16:12	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/19/21 12:00	05/19/21 16:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130	05/19/21 12:00	05/19/21 16:12	1
1,4-Difluorobenzene (Surr)	122		70 - 130	05/19/21 12:00	05/19/21 16:12	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 18:01	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 18:01	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 18:01	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 18:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	117		70 - 130	05/19/21 08:36	05/19/21 18:01	1
o-Terphenyl	133	S1+	70 - 130	05/19/21 08:36	05/19/21 18:01	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	574		24.9	mg/Kg			05/19/21 17:21	5

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-688-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-688-1	SW05	118	122
LCS 880-3212/1-A	Lab Control Sample	109	101
MB 880-3212/5-A	Method Blank	88	94

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
LCSD 880-3212/2-A	Lab Control Sample Dup		

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
890-688-1	SW05	117	133 S1+
LCS 880-3219/2-A	Lab Control Sample	105	103
LCSD 880-3219/3-A	Lab Control Sample Dup	106	113
MB 880-3219/1-A	Method Blank	110	129

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-688-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3212/5-A
Matrix: Solid
Analysis Batch: 3218

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3212

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/19/21 09:00	05/19/21 11:30	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/19/21 09:00	05/19/21 11:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130	05/19/21 09:00	05/19/21 11:30	1
1,4-Difluorobenzene (Surr)	94		70 - 130	05/19/21 09:00	05/19/21 11:30	1

Lab Sample ID: LCS 880-3212/1-A
Matrix: Solid
Analysis Batch: 3218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3212

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07738		mg/Kg		77	70 - 130
Toluene	0.100	0.08113		mg/Kg		81	70 - 130
Ethylbenzene	0.100	0.09084		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	0.200	0.1903		mg/Kg		95	70 - 130
o-Xylene	0.100	0.09828		mg/Kg		98	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: LCSD 880-3212/2-A
Matrix: Solid
Analysis Batch: 3218

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3212

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.07397		mg/Kg					
Toluene	0.100	0.07950		mg/Kg					
Ethylbenzene	0.100	0.09287		mg/Kg					
m-Xylene & p-Xylene	0.200	0.1968		mg/Kg					
o-Xylene	0.100	0.1026		mg/Kg					

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)			
1,4-Difluorobenzene (Surr)			

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-688-1
SDG: TE012919259

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-3219/1-A
Matrix: Solid
Analysis Batch: 3220

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3219

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 10:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 10:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 10:13	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 10:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130	05/19/21 08:36	05/19/21 10:13	1
o-Terphenyl	129		70 - 130	05/19/21 08:36	05/19/21 10:13	1

Lab Sample ID: LCS 880-3219/2-A
Matrix: Solid
Analysis Batch: 3220

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3219

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	970.2		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1191		mg/Kg		119	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: LCSD 880-3219/3-A
Matrix: Solid
Analysis Batch: 3220

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3219

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	995.0		mg/Kg		99	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	1250		mg/Kg		125	70 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	113		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3229/1-A
Matrix: Solid
Analysis Batch: 3252

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/19/21 15:29	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI I Combined

Job ID: 890-688-1
 SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3229/2-A
 Matrix: Solid
 Analysis Batch: 3252

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	253.8		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-3229/3-A
 Matrix: Solid
 Analysis Batch: 3252

Client Sample ID: Lab Control Sample Dup
 Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	254.3		mg/Kg		102	90 - 110	0	20

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-688-1
SDG: TE012919259

GC VOA

Prep Batch: 3212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-688-1	SW05	Total/NA	Solid	5035	
MB 880-3212/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3212/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3212/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-688-1	SW05	Total/NA	Solid	8021B	3212
MB 880-3212/5-A	Method Blank	Total/NA	Solid	8021B	3212
LCS 880-3212/1-A	Lab Control Sample	Total/NA	Solid	8021B	3212
LCSD 880-3212/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3212

GC Semi VOA

Prep Batch: 3219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-688-1	SW05	Total/NA	Solid	8015NM Prep	
MB 880-3219/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3219/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3219/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-688-1	SW05	Total/NA	Solid	8015B NM	3219
MB 880-3219/1-A	Method Blank	Total/NA	Solid	8015B NM	3219
LCS 880-3219/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3219
LCSD 880-3219/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3219

HPLC/IC

Leach Batch: 3229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-688-1	SW05	Soluble	Solid	DI Leach	
MB 880-3229/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 3252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-688-1	SW05	Soluble	Solid	300.0	3229
MB 880-3229/1-A	Method Blank	Soluble	Solid	300.0	3229
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	300.0	3229
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3229

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-688-1
SDG: TE012919259

Client Sample ID: SW05

Lab Sample ID: 890-688-1

Date Collected: 05/17/21 10:55

Matrix: Solid

Date Received: 05/18/21 15:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3212	05/19/21 12:00	KL	XEN MID
Total/NA	Analysis	8021B		1	3218	05/19/21 16:12	KL	XEN MID
Total/NA	Prep	8015NM Prep			3219	05/19/21 08:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3220	05/19/21 18:01	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		5	3252	05/19/21 17:21	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-688-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-688-1
SDG: TE012919259

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

Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-688-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-688-1	SW05	Solid	05/17/21 10:55	05/18/21 15:04	0 - 8

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Environment Testing
Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: _____

www.xenco.com Page _____ of _____

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTELL
Company Name:	WSP USA	Company Name:	XTD ENERGY
Address:	3320 N A ST	Address:	3104 E GREENE ST
City, State ZIP:	MIDLAND, TX 79705	City, State ZIP:	CARLSBAD, NM 88224
Phone:	(505) 702-2329	Email:	anna.burgess@wsp.com

Work Order Comments	
Program: UST/PST	<input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting: Level II	<input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables: EDD	<input type="checkbox"/> ADAPT <input type="checkbox"/> Other: _____

Project Name:	TRU DIE 1 Combined	Turn Around	Pres. Code
Project Number:	TEP22A1925A	<input type="checkbox"/> Routine <input checked="" type="checkbox"/> Rush	
Project Location:	EDDY COUNTY	Due Date: <u>Saturday</u>	
Sampler's Name:	ANNA BURGESS	FAF starts the day received by the lab, if received by 4:30pm	
PO #:	APP-2267	Temp Blank: <input checked="" type="radio"/> Yes <input type="radio"/> No	Wet Ice: <input checked="" type="radio"/> Yes <input type="radio"/> No
SAMPLE RECEIPT			
Samples Received Intact:	<input checked="" type="radio"/> Yes <input type="radio"/> No	Thermometer ID: <u>STM-587</u>	
Cooler Custody Seals:	<input checked="" type="radio"/> Yes <input type="radio"/> No	Correction Factor: <u>1.11, 1.2</u>	
Sample Custody Seals:	<input checked="" type="radio"/> Yes <input type="radio"/> No	Temperature Reading: <u>0.2</u>	
Total Containers:		Corrected Temperature:	



Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters
<u>SWP5</u>	S	<u>5/19/21</u>	<u>1055</u>	<u>0-8' Camp</u>	<u>1</u>	<u>1</u>	<u>TPH (EPA 815 incl)</u> <u>BTEX (EPA 8021 B)</u> <u>Chloride (EPA 378.0)</u>
<u>AG</u>							
Sample Comments: <u>ACE:</u> <u>EN 2421, 01559, EXP. 01</u> <u>1082151001</u> <u>CEST CENTRE:</u>							

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 A1 Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag TI U Hg: 1631 / 245.1 / 7470 / 7471

Grede Method(s) and Material(s) to be analyzed: TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins 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 Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample authorized to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<u>[Signature]</u>	<u>[Signature]</u>	<u>5-18-21 1504</u>			

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-688-1
SDG Number: TE012919259

Login Number: 688
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-688-1
SDG Number: TE012919259

Login Number: 688
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Xenco, Midland
List Creation: 05/19/21 02:27 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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Environment Testing
America

ANALYTICAL REPORT

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-689-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI I Combined

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Dan Moir

Authorized for release by:
5/19/2021 8:18:47 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com



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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Laboratory Job ID: 890-689-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-689-1
SDG: TE012919259

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-689-1
SDG: TE012919259

Job ID: 890-689-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

**Job Narrative
890-689-1**

Receipt

The sample was received on 5/18/2021 3:04 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: SW04 (890-689-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The LCS duplicate was biased low for benzene, due to method requirements only calling for an acceptable laboratory control spike the data was reported as a rush was requested by the client, however another LCSD will be analyzed at the completion of the sequence to confirm the low benzene bias was as a result of a bad injection and has no adverse affect on the data reported.SW04 (890-689-1)

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: JRU DI I Combined

Job ID: 890-689-1
SDG: TE012919259

Client Sample ID: SW04

Lab Sample ID: 890-689-1

Date Collected: 05/17/21 10:50

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: 0 - 8

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/19/21 09:21	05/19/21 14:49	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/19/21 09:21	05/19/21 14:49	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/19/21 09:21	05/19/21 14:49	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		05/19/21 09:21	05/19/21 14:49	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/19/21 09:21	05/19/21 14:49	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		05/19/21 09:21	05/19/21 14:49	1
Total BTEX	<0.00397	U	0.00397	mg/Kg		05/19/21 09:21	05/19/21 14:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	05/19/21 09:21	05/19/21 14:49	1
1,4-Difluorobenzene (Surr)	115		70 - 130	05/19/21 09:21	05/19/21 14:49	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 18:01	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 18:01	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 18:01	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 18:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130	05/19/21 08:44	05/19/21 18:01	1
o-Terphenyl	96		70 - 130	05/19/21 08:44	05/19/21 18:01	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	182		5.00	mg/Kg			05/19/21 17:27	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-689-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-689-1	SW04	107	115
LCS 880-3227/1-A	Lab Control Sample	92	116
MB 880-3227/5-A	Method Blank	106	99

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-689-1	SW04	86	96
LCS 880-3222/2-A	Lab Control Sample	87	96
LCSD 880-3222/3-A	Lab Control Sample Dup	91	101
MB 880-3222/1-A	Method Blank	91	106

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-689-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3227/5-A
Matrix: Solid
Analysis Batch: 3230

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3227

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 12:41	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	106		70 - 130	05/19/21 09:21	05/19/21 12:41	1
1,4-Difluorobenzene (Surr)	99		70 - 130	05/19/21 09:21	05/19/21 12:41	1

Lab Sample ID: LCS 880-3227/1-A
Matrix: Solid
Analysis Batch: 3230

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3227

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Benzene	0.100	0.07413		mg/Kg		74	70 - 130
Toluene	0.100	0.08170		mg/Kg		82	70 - 130
Ethylbenzene	0.100	0.08134		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	0.200	0.1595		mg/Kg		80	70 - 130
o-Xylene	0.100	0.08025		mg/Kg		80	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	92		70 - 130
1,4-Difluorobenzene (Surr)	116		70 - 130

Lab Sample ID: LCSD 880-3227/2-A
Matrix: Solid
Analysis Batch: 3230

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3227

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec. Limits	RPD	
		Result	Qualifier					RPD	Limit
Benzene	0.100	0.07130		mg/Kg					
Toluene	0.100	0.07872		mg/Kg					
Ethylbenzene	0.100	0.07830		mg/Kg					
m-Xylene & p-Xylene	0.200	0.1574		mg/Kg					
o-Xylene	0.100	0.07894		mg/Kg					

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-3222/1-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3222

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-689-1
SDG: TE012919259

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-3222/1-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3222

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1-Chlorooctane	91		70 - 130	05/19/21 08:44	05/19/21 10:13	1
o-Terphenyl	106		70 - 130	05/19/21 08:44	05/19/21 10:13	1

Lab Sample ID: LCS 880-3222/2-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3222

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Gasoline Range Organics (GRO)-C6-C10	1000	904.4		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1051		mg/Kg		105	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1-Chlorooctane	87		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: LCSD 880-3222/3-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3222

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
		Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	1000	888.8		mg/Kg		89	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	1109		mg/Kg		111	70 - 130	5	20

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
1-Chlorooctane	91		70 - 130
o-Terphenyl	101		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3229/1-A
Matrix: Solid
Analysis Batch: 3252

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Chloride	<5.00	U	5.00	mg/Kg			05/19/21 15:29	1

QC Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI I Combined

Job ID: 890-689-1
 SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3229/2-A
 Matrix: Solid
 Analysis Batch: 3252

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	253.8		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-3229/3-A
 Matrix: Solid
 Analysis Batch: 3252

Client Sample ID: Lab Control Sample Dup
 Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	254.3		mg/Kg		102	90 - 110	0	20

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-689-1
SDG: TE012919259

GC VOA

Prep Batch: 3227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-689-1	SW04	Total/NA	Solid	5035	
MB 880-3227/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3227/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3227/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-689-1	SW04	Total/NA	Solid	8021B	3227
MB 880-3227/5-A	Method Blank	Total/NA	Solid	8021B	3227
LCS 880-3227/1-A	Lab Control Sample	Total/NA	Solid	8021B	3227
LCSD 880-3227/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3227

GC Semi VOA

Prep Batch: 3222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-689-1	SW04	Total/NA	Solid	8015NM Prep	
MB 880-3222/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3222/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3222/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-689-1	SW04	Total/NA	Solid	8015B NM	3222
MB 880-3222/1-A	Method Blank	Total/NA	Solid	8015B NM	3222
LCS 880-3222/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3222
LCSD 880-3222/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3222

HPLC/IC

Leach Batch: 3229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-689-1	SW04	Soluble	Solid	DI Leach	
MB 880-3229/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 3252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-689-1	SW04	Soluble	Solid	300.0	3229
MB 880-3229/1-A	Method Blank	Soluble	Solid	300.0	3229
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	300.0	3229
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3229

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-689-1
SDG: TE012919259

Client Sample ID: SW04

Lab Sample ID: 890-689-1

Date Collected: 05/17/21 10:50

Matrix: Solid

Date Received: 05/18/21 15:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3227	05/19/21 09:21	KL	XEN MID
Total/NA	Analysis	8021B		1	3230	05/19/21 14:49	KL	XEN MID
Total/NA	Prep	8015NM Prep			3222	05/19/21 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3224	05/19/21 18:01	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		1	3252	05/19/21 17:27	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-689-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
 Project/Site: JRU DI I Combined

Job ID: 890-689-1
 SDG: TE012919259

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



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-689-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-689-1	SW04	Solid	05/17/21 10:50	05/18/21 15:04	0 - 8

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Environment Testing
Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No:

www.xenco.com Page of

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTELL
Company Name:	WSP USA	Company Name:	XTD ENERGY
Address:	3320 N A ST	Address:	3104 E GREENE ST
City, State ZIP:	MIDLAND, TX 79705	City, State ZIP:	CARLSBAD, NM 88224
Phone:	(505) 702-2329	Email:	anna.bryes@wsp.com

Work Order Comments	
Program: UST/PST	<input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting: Level II	<input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables: EDD	<input type="checkbox"/> ADAPT <input type="checkbox"/> Other:

Project Name:	JRU DE I Combined	Turn Around	
Project Number:	TEP02A1925A	<input type="checkbox"/> Routine <input checked="" type="checkbox"/> Rush	Pres. Code
Project Location:	EDDY COUNTY	Due Date:	Same day
Sampler Name:	ANNA BRYES	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	200-2267	Wet Ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
SAMPLE RECEIPT		Temp Blank:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Samples Received Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Thermometer ID:	711111111111
Cooler Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Correction Factor:	-0.2
Sample Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Temperature Reading:	1.4/1.2
Total Containers:		Corrected Temperature:	



890-689 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab Comp	# of Cont	Parameters
SWBY	S	5/13/21	10:50	0-8' Comp	1		TPH (EPA 8215 MCL) BTEX (EPA 821 B) Chlorock (EPA 348.0)
<i>[Handwritten Signature]</i>							
PRESERVATIVE CODES							
None: NO DI Water: H ₂ O							
Cool: Cool MeOH: Me							
HCL: HC HNO ₃ : HN							
H ₂ SO ₄ : H ₂ NaOH: Na							
H ₃ PO ₄ : HP							
NaHSO ₄ : NABIS							
Na ₂ S ₂ O ₃ : NaSO ₃							
Zn Acetate+NaOH: Zn							
NaOH+Ascorbic Acid: SAPC							
Sample Comments							
ACE:							
EW 2021 01559. EXP 01							
COST CENTRE:							
1082151001							

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na S-H Sa U V Zn

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U Hg: 1631 / 245.1 / 7470 / 7471

Notes: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins 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 Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

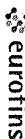
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	5-18-21 10:54			

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Eurofins Xenco, Carlsbad

1089 N Canal St
Carlsbad NM 88220
Phone 575-988-3199 Fax 575-988-3199

Chain of Custody Record



Environment Testing
America

Client Information (Sub Contract Lab)		Sampler	Lab PM	Carrier/Tracking No(s)	COC No:
Client Contact: Shipping/Receiving		Phone	Kramer Jessica		890-223-1
Company: Eurofins Xenco		E-Mail	jessica.kramer@eurofinsnet.com	State of Origin:	Page: Page 1 of 1
Address: 1211 W. Florida Ave		Accreditations Required (See note):	NELAP - Louisiana NELAP - Texas		Job #: 890-689-1
City: Midland	Due Date Requested: 5/20/2021	Analysis Requested			
State Zip: TX 79701	TAT Requested (days)				
Phone: 432-704-5440(Tel)	PO #:				
Email: JRO DI Combined	WC #:				
Project Name: JRO DI Combined	Project #:				
Site: SSOV#:	SSOV#:				
Sample Identification - Client ID (Lab ID)		Field Filtered Sample (Yes or No)			
SWD4 (890-689-1)		Perform MS/MSD (Yes or No)			
Sample Date: 5/17/21	Sample Time: 10:50	8016MOD_NM/8016NM_S_Prep Full TPH			
Sample Type: G=grab	Matrix: Solid	300_ORGFM_28/DI_LEACH Chloride			
Preservation Code: BT-Tissue, A-AH		8021B/6036FP_Calc BTEX			
		Total Number of containers	1		
		Special Instructions/Note:			

Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon our subcontracted laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysts/staff/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.

Possible Hazard Identification

Unconfirmed Deliverable Requested: I II III IV Other (Specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements: Return To Client Dispose By Lab Archive For _____ Months

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: *[Signature]* Date/Time: 5-19-21 Company: _____

Relinquished by: *[Signature]* Date/Time: _____ Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No Custody Seal No: _____

Colder Temperature(s) °C and Other Remarks: _____

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-689-1
SDG Number: TE012919259

Login Number: 689
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-689-1

SDG Number: TE012919259

Login Number: 689

List Number: 2

Creator: Copeland, Tatiana

List Source: Eurofins Xenco, Midland

List Creation: 05/19/21 02:27 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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Environment Testing
America

ANALYTICAL REPORT

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-690-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI I Combined

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Dan Moir

Authorized for release by:
5/19/2021 8:19:55 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com



LINKS

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www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Laboratory Job ID: 890-690-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-690-1
SDG: TE012919259

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-690-1
SDG: TE012919259

Job ID: 890-690-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

**Job Narrative
890-690-1**

Receipt

The sample was received on 5/18/2021 3:04 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

GC VOA

Method 8021B: The LCS duplicate was biased low for benzene, due to method requirements only calling for an acceptable laboratory control spike the data was reported as a rush was requested by the client, however another LCSD will be analyzed at the completion of the sequence to confirm the low benzene bias was as a result of a bad injection and has no adverse affect on the data reported.SW03 (890-690-1)

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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Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-690-1
SDG: TE012919259

Client Sample ID: SW03

Lab Sample ID: 890-690-1

Date Collected: 05/17/21 09:40

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: 0 - 8

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 15:09	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 15:09	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 15:09	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		05/19/21 09:21	05/19/21 15:09	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 15:09	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		05/19/21 09:21	05/19/21 15:09	1
Total BTEX	<0.00401	U	0.00401	mg/Kg		05/19/21 09:21	05/19/21 15:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	05/19/21 09:21	05/19/21 15:09	1
1,4-Difluorobenzene (Surr)	103		70 - 130	05/19/21 09:21	05/19/21 15:09	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 15:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 15:41	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 15:41	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 15:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130	05/19/21 08:44	05/19/21 15:41	1
o-Terphenyl	111		70 - 130	05/19/21 08:44	05/19/21 15:41	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	361	F1	25.0	mg/Kg			05/19/21 17:32	5

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.
 Project/Site: JRU DI I Combined

Job ID: 890-690-1
 SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-690-1	SW03	113	103
LCS 880-3227/1-A	Lab Control Sample	92	116
MB 880-3227/5-A	Method Blank	106	99

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
 DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-690-1	SW03	98	111
LCS 880-3222/2-A	Lab Control Sample	87	96
LCSD 880-3222/3-A	Lab Control Sample Dup	91	101
MB 880-3222/1-A	Method Blank	91	106

Surrogate Legend

1CO = 1-Chlorooctane
 OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-690-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3227/5-A
Matrix: Solid
Analysis Batch: 3230

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3227

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 12:41	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	106		70 - 130	05/19/21 09:21	05/19/21 12:41	1
1,4-Difluorobenzene (Surr)	99		70 - 130	05/19/21 09:21	05/19/21 12:41	1

Lab Sample ID: LCS 880-3227/1-A
Matrix: Solid
Analysis Batch: 3230

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3227

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	0.100	0.08170		mg/Kg		82	70 - 130
Ethylbenzene	0.100	0.08134		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	0.200	0.1595		mg/Kg		80	70 - 130
o-Xylene	0.100	0.08025		mg/Kg		80	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	92		70 - 130
1,4-Difluorobenzene (Surr)	116		70 - 130

Lab Sample ID: LCSD 880-3227/2-A
Matrix: Solid
Analysis Batch: 3230

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3227

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	
								RPD	Limit
Benzene	0.100	0.07130		mg/Kg					
Toluene	0.100	0.07872		mg/Kg					
Ethylbenzene	0.100	0.07830		mg/Kg					
m-Xylene & p-Xylene	0.200	0.1574		mg/Kg					
o-Xylene	0.100	0.07894		mg/Kg					

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-3222/1-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3222

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-690-1
SDG: TE012919259

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-3222/1-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3222

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1-Chlorooctane	91		70 - 130	05/19/21 08:44	05/19/21 10:13	1
o-Terphenyl	106		70 - 130	05/19/21 08:44	05/19/21 10:13	1

Lab Sample ID: LCS 880-3222/2-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3222

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Gasoline Range Organics (GRO)-C6-C10	1000	904.4		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1051		mg/Kg		105	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1-Chlorooctane	87		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: LCSD 880-3222/3-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3222

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
		Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	1000	888.8		mg/Kg		89	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	1109		mg/Kg		111	70 - 130	5	20

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
1-Chlorooctane	91		70 - 130
o-Terphenyl	101		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3229/1-A
Matrix: Solid
Analysis Batch: 3252

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Chloride	<5.00	U	5.00	mg/Kg			05/19/21 15:29	1

QC Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI I Combined

Job ID: 890-690-1
 SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3229/2-A
 Matrix: Solid
 Analysis Batch: 3252

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	253.8		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-3229/3-A
 Matrix: Solid
 Analysis Batch: 3252

Client Sample ID: Lab Control Sample Dup
 Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	254.3		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-690-1 MS
 Matrix: Solid
 Analysis Batch: 3252

Client Sample ID: SW03
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	361	F1	250	1506	F1	mg/Kg		458	90 - 110

Lab Sample ID: 890-690-1 MSD
 Matrix: Solid
 Analysis Batch: 3252

Client Sample ID: SW03
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	361	F1	250	1488	F1	mg/Kg		451	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-690-1
SDG: TE012919259

GC VOA

Prep Batch: 3227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-690-1	SW03	Total/NA	Solid	5035	
MB 880-3227/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3227/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3227/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-690-1	SW03	Total/NA	Solid	8021B	3227
MB 880-3227/5-A	Method Blank	Total/NA	Solid	8021B	3227
LCS 880-3227/1-A	Lab Control Sample	Total/NA	Solid	8021B	3227
LCSD 880-3227/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3227

GC Semi VOA

Prep Batch: 3222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-690-1	SW03	Total/NA	Solid	8015NM Prep	
MB 880-3222/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3222/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3222/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-690-1	SW03	Total/NA	Solid	8015B NM	3222
MB 880-3222/1-A	Method Blank	Total/NA	Solid	8015B NM	3222
LCS 880-3222/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3222
LCSD 880-3222/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3222

HPLC/IC

Leach Batch: 3229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-690-1	SW03	Soluble	Solid	DI Leach	
MB 880-3229/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-690-1 MS	SW03	Soluble	Solid	DI Leach	
890-690-1 MSD	SW03	Soluble	Solid	DI Leach	

Analysis Batch: 3252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-690-1	SW03	Soluble	Solid	300.0	3229
MB 880-3229/1-A	Method Blank	Soluble	Solid	300.0	3229
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	300.0	3229
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3229
890-690-1 MS	SW03	Soluble	Solid	300.0	3229
890-690-1 MSD	SW03	Soluble	Solid	300.0	3229

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
 Project/Site: JRU DI I Combined

Job ID: 890-690-1
 SDG: TE012919259

Client Sample ID: SW03

Lab Sample ID: 890-690-1

Date Collected: 05/17/21 09:40

Matrix: Solid

Date Received: 05/18/21 15:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3227	05/19/21 09:21	KL	XEN MID
Total/NA	Analysis	8021B		1	3230	05/19/21 15:09	KL	XEN MID
Total/NA	Prep	8015NM Prep			3222	05/19/21 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3224	05/19/21 15:41	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		5	3252	05/19/21 17:32	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-690-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-690-1
SDG: TE012919259

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

Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-690-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-690-1	SW03	Solid	05/17/21 09:40	05/18/21 15:04	0 - 8

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Environment Testing
Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: _____

www.xenco.com Page _____ of _____

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTELL
Company Name:	WSP USA	Company Name:	XTD ENERGY
Address:	3378 N A ST	Address:	3104 E GREENE ST
City, State ZIP:	MIDLAND, TX 79705	City, State ZIP:	CARLSBAD, NM 88220
Phone:	(915) 782-2329	Email:	anna.beyer@wsp.com

Work Order Comments	
Program: UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>	
State of Project:	
Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>	
Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: _____	

Project Name:	JRU DIE 1 Combined	Turn Around	<input type="checkbox"/> Routine <input checked="" type="checkbox"/> Rush	Pres. Code	
Project Number:	TEP12A19259	Due Date:	Same day		
Project Location:	EDDY COUNTY	TAT starts the day received by the lab, if received by 4:30pm			
Sampler's Name:	ANNA BEYER	Thermometer ID:	ZYMWOOD		
PO #:	100-2267	Wet Ice:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
SAMPLE RECEIPT		Temp Blank:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	ANALYSIS REQUEST	
Samples Received In tact:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Correction Factor:	-0.2	None: NO <input type="checkbox"/> DI Water: H ₂ O <input type="checkbox"/>	
Cooler Custody Seals:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Temperature Reading:		Cool: Cool <input type="checkbox"/> MeOH: Me <input type="checkbox"/>	
Sample Custody Seals:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Corrected Temperature:		HCL: HC <input type="checkbox"/> HNO ₃ : HN <input type="checkbox"/>	
Total Containers:				H ₂ SO ₄ : H ₂ <input type="checkbox"/> NaOH: Na <input type="checkbox"/>	
				H ₃ PO ₄ : HP <input type="checkbox"/>	
				NaHSO ₄ : NABIS <input type="checkbox"/>	
				Na ₂ S ₂ O ₃ : NASO ₃ <input type="checkbox"/>	
				Zn Acetate+NaOH: Zn <input type="checkbox"/>	
				NaOH+Ascorbic Acid: SACP <input type="checkbox"/>	



Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters	Preservative Codes	Sample Comments
SWP3	S	5/13/21	0940	6-8'	Comp	1	X TPH (EPA 8215 mcl)	None: NO	ACE:
							X BTEX (EPA 8021 B)	Cool: Cool	EW 2421 (21559, EXP. 01)
							X Chloride (EPA 308.0)	HCL: HC	COST CENTRE:
								H ₂ SO ₄ : H ₂	1082151801
								H ₃ PO ₄ : HP	
								NaHSO ₄ : NABIS	
								Na ₂ S ₂ O ₃ : NASO ₃	
								Zn Acetate+NaOH: Zn	
								NaOH+Ascorbic Acid: SACP	

Total 200.7/6010 200.8/6020: 8RCRA 13PPM Texas 11 AL Sb As Ba Be B Cd Ca Cr Co Cu Ee Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti So U V Zr

Circle Method(s) and Meta(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631/245.1/7470/7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins 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 Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Anna Beyer</i>	<i>Joe Cuff</i>	5-18-21 15:04			

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-690-1
SDG Number: TE012919259

Login Number: 690
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-690-1
SDG Number: TE012919259

Login Number: 690
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Xenco, Midland
List Creation: 05/19/21 02:26 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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Environment Testing
America

ANALYTICAL REPORT

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-691-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI I Combined

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Dan Moir

Authorized for release by:
5/19/2021 8:44:58 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com



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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Laboratory Job ID: 890-691-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-691-1
SDG: TE012919259

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-691-1
SDG: TE012919259

Job ID: 890-691-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-691-1

Comments

No additional comments.

Receipt

The sample was received on 5/18/2021 3:04 PM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.2° C.

GC VOA

Method 8021B: The LCS duplicate was biased low for benzene, due to method requirements only calling for an acceptable laboratory control spike the data was reported as a rush was requested by the client, however another LCSD will be analyzed at the completion of the sequence to confirm the low benzene bias was as a result of a bad injection and has no adverse affect on the data reported.

SW02 (890-691-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-691-1
SDG: TE012919259

Client Sample ID: SW02

Lab Sample ID: 890-691-1

Date Collected: 05/17/21 09:15

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: 0 - 8

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/19/21 09:21	05/19/21 15:30	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/19/21 09:21	05/19/21 15:30	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/19/21 09:21	05/19/21 15:30	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/19/21 09:21	05/19/21 15:30	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/19/21 09:21	05/19/21 15:30	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/19/21 09:21	05/19/21 15:30	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/19/21 09:21	05/19/21 15:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	05/19/21 09:21	05/19/21 15:30	1
1,4-Difluorobenzene (Surr)	111		70 - 130	05/19/21 09:21	05/19/21 15:30	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 10:30	05/19/21 16:01	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/19/21 10:30	05/19/21 16:01	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 10:30	05/19/21 16:01	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 10:30	05/19/21 16:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130	05/19/21 10:30	05/19/21 16:01	1
o-Terphenyl	102		70 - 130	05/19/21 10:30	05/19/21 16:01	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	86.8		4.95	mg/Kg			05/19/21 20:00	1

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-691-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)**Matrix: Solid****Prep Type: Total/NA**

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
890-691-1	SW02	92	111
LCS 880-3227/1-A	Lab Control Sample	92	116
MB 880-3227/5-A	Method Blank	106	99

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)**Matrix: Solid****Prep Type: Total/NA**

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
890-691-1	SW02	91	102
LCS 880-3222/2-A	Lab Control Sample	87	96
LCSD 880-3222/3-A	Lab Control Sample Dup	91	101
MB 880-3222/1-A	Method Blank	91	106

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-691-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3227/5-A
Matrix: Solid
Analysis Batch: 3230

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3227

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 12:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	05/19/21 09:21	05/19/21 12:41	1
1,4-Difluorobenzene (Surr)	99		70 - 130	05/19/21 09:21	05/19/21 12:41	1

Lab Sample ID: LCS 880-3227/1-A
Matrix: Solid
Analysis Batch: 3230

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3227

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07413		mg/Kg		74	70 - 130
Toluene	0.100	0.08170		mg/Kg		82	70 - 130
Ethylbenzene	0.100	0.08134		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	0.200	0.1595		mg/Kg		80	70 - 130
o-Xylene	0.100	0.08025		mg/Kg		80	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		70 - 130
1,4-Difluorobenzene (Surr)	116		70 - 130

Lab Sample ID: LCSD 880-3227/2-A
Matrix: Solid
Analysis Batch: 3230

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3227

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.07130		mg/Kg					
Toluene	0.100	0.07872		mg/Kg					
Ethylbenzene	0.100	0.07830		mg/Kg					
m-Xylene & p-Xylene	0.200	0.1574		mg/Kg					
o-Xylene	0.100	0.07894		mg/Kg					

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-3222/1-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3222

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-691-1
SDG: TE012919259

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-3222/1-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3222

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130	05/19/21 08:44	05/19/21 10:13	1
o-Terphenyl	106		70 - 130	05/19/21 08:44	05/19/21 10:13	1

Lab Sample ID: LCS 880-3222/2-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3222

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	904.4		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1051		mg/Kg		105	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: LCSD 880-3222/3-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3222

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	888.8		mg/Kg		89	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	1109		mg/Kg		111	70 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	101		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3229/1-A
Matrix: Solid
Analysis Batch: 3252

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/19/21 15:29	1

QC Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI I Combined

Job ID: 890-691-1
 SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3229/2-A
 Matrix: Solid
 Analysis Batch: 3252

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	253.8		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-3229/3-A
 Matrix: Solid
 Analysis Batch: 3252

Client Sample ID: Lab Control Sample Dup
 Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	254.3		mg/Kg		102	90 - 110	0	20

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-691-1
SDG: TE012919259

GC VOA

Prep Batch: 3227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-691-1	SW02	Total/NA	Solid	5035	
MB 880-3227/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3227/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3227/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-691-1	SW02	Total/NA	Solid	8021B	3227
MB 880-3227/5-A	Method Blank	Total/NA	Solid	8021B	3227
LCS 880-3227/1-A	Lab Control Sample	Total/NA	Solid	8021B	3227
LCSD 880-3227/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3227

GC Semi VOA

Prep Batch: 3222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-691-1	SW02	Total/NA	Solid	8015NM Prep	
MB 880-3222/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3222/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3222/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-691-1	SW02	Total/NA	Solid	8015B NM	3222
MB 880-3222/1-A	Method Blank	Total/NA	Solid	8015B NM	3222
LCS 880-3222/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3222
LCSD 880-3222/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3222

HPLC/IC

Leach Batch: 3229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-691-1	SW02	Soluble	Solid	DI Leach	
MB 880-3229/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 3252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-691-1	SW02	Soluble	Solid	300.0	3229
MB 880-3229/1-A	Method Blank	Soluble	Solid	300.0	3229
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	300.0	3229
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3229

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-691-1
SDG: TE012919259

Client Sample ID: SW02
Date Collected: 05/17/21 09:15
Date Received: 05/18/21 15:04

Lab Sample ID: 890-691-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3227	05/19/21 09:21	KL	XEN MID
Total/NA	Analysis	8021B		1	3230	05/19/21 15:30	KL	XEN MID
Total/NA	Prep	8015NM Prep			3222	05/19/21 10:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3224	05/19/21 16:01	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		1	3252	05/19/21 20:00	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-691-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
 Project/Site: JRU DI I Combined

Job ID: 890-691-1
 SDG: TE012919259

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



Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-691-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-691-1	SW02	Solid	05/17/21 09:15	05/18/21 15:04	0 - 8

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Chain of Custody Record



Environment Testing
America

1089 N Canal St
Carlsbad NM 88220
Phone 575-988-3199 Fax: 575-988-3199

Client Information (Sub Contract Lab)

Client Contact:
Shipping/Receiving
Company
Eurofins Xenco

Sampler
Phone
Due Date Requested
5/20/2021
TAT Requested (days)

Lab PM
Kramer Jessica
E-Mail
jessica.kramer@eurofins.com
Accreditations Required (See note)
NELAP - Louisiana, NELAP - Texas

Carrier Tracking No(s)
State of Origin
New Mexico

COC No:
890-223 1
Page:
Page 1 of 1
Job #:
890-691-1

Address
1211 W Florida Ave
City
Midland
State, Zip
TX 79701
Phone
432-704-5440(Ext)
Email

Project Name
JRO DI Combined
Site

Project #
89000004
SSOW#

Analysis Requested

Preservation Codes

PO #
WO #
Field Filtered Sample (Yes or No)
Perform MS/MSD (Yes or No)

8015MOD_NM/8015NM_S_Prep Full TPH	X	X	X
300_ORGFM_28D/DI_LEACH Chloride	X	X	X
8021B/6035FP_Calc BTEX	X	X	X

- A. HCl
- B. NaOH
- C. Zn Acetate
- D. Nitric Acid
- E. NaHSO4
- F. MeOH
- G. Ammonia
- H. Ascorbic Acid
- I. Ice
- J. DI Water
- K. EDTA
- L. EDA
- M. Hexane
- N. None
- O. AsNaO2
- P. Na2OAS
- Q. Na2SO3
- R. Na2S2O3
- S. H2SO4
- T. TSP Dodecahydrate
- U. Acetone
- V. MCAA
- W. pH 4.5
- Z. other (specify)

Sample Identification - Client ID (Lab ID)

SW02 (890-691-1)
Sample Date
5/17/21
Sample Time
09 15
Sample Type (C=comp, G=grab)
Preservation Code
Solid
Matrix (W=water, S=solid, O=volatile, BI=1-tissue, A=AI)

Total Number of containers
1

Special Instructions/Note.

Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/estimates/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.

Possible Hazard Identification

Unconfirmed
Deliverable Requested I II III IV Other (specify)
Primary Deliverable Rank 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
Special Instructions/QC Requirements

Empty Kit Relinquished by
Date

Relinquished by
Date/Time
Company

Relinquished by
Date/Time
Company

Relinquished by
Date/Time
Company

Custody Seals Intact: Yes No
Custody Seal No
Cooler Temperature(s) °C and Other Remarks



Environment Testing
America

ANALYTICAL REPORT

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-692-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI I Combined

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Dan Moir

Authorized for release by:
5/19/2021 8:21:11 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com



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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Laboratory Job ID: 890-692-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-692-1
SDG: TE012919259

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-692-1
SDG: TE012919259

Job ID: 890-692-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

**Job Narrative
890-692-1**

Receipt

The sample was received on 5/18/2021 3:04 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: SW01 (890-692-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The LCS duplicate was biased low for benzene, due to method requirements only calling for an acceptable laboratory control spike the data was reported as a rush was requested by the client, however another LCSD will be analyzed at the completion of the sequence to confirm the low benzene bias was as a result of a bad injection and has no adverse affect on the data reported.SW01 (890-692-1)

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: JRU DI I Combined

Job ID: 890-692-1
 SDG: TE012919259

Client Sample ID: SW01

Lab Sample ID: 890-692-1

Date Collected: 05/17/21 09:10

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: 0 - 8

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 15:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 15:51	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 15:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 15:51	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 15:51	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 15:51	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 15:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	05/19/21 09:21	05/19/21 15:51	1
1,4-Difluorobenzene (Surr)	126		70 - 130	05/19/21 09:21	05/19/21 15:51	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 10:30	05/19/21 16:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/19/21 10:30	05/19/21 16:46	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 10:30	05/19/21 16:46	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 10:30	05/19/21 16:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130	05/19/21 10:30	05/19/21 16:46	1
o-Terphenyl	106		70 - 130	05/19/21 10:30	05/19/21 16:46	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	226		4.96	mg/Kg			05/19/21 17:54	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-692-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-692-1	SW01	109	126
LCS 880-3227/1-A	Lab Control Sample	92	116
MB 880-3227/5-A	Method Blank	106	99

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
LCSD 880-3227/2-A	Lab Control Sample Dup		

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-692-1	SW01	91	106
LCS 880-3222/2-A	Lab Control Sample	87	96
LCSD 880-3222/3-A	Lab Control Sample Dup	91	101
MB 880-3222/1-A	Method Blank	91	106

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-692-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3227/5-A
Matrix: Solid
Analysis Batch: 3230

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3227

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 12:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	05/19/21 09:21	05/19/21 12:41	1
1,4-Difluorobenzene (Surr)	99		70 - 130	05/19/21 09:21	05/19/21 12:41	1

Lab Sample ID: LCS 880-3227/1-A
Matrix: Solid
Analysis Batch: 3230

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3227

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07413		mg/Kg		74	70 - 130
Toluene	0.100	0.08170		mg/Kg		82	70 - 130
Ethylbenzene	0.100	0.08134		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	0.200	0.1595		mg/Kg		80	70 - 130
o-Xylene	0.100	0.08025		mg/Kg		80	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		70 - 130
1,4-Difluorobenzene (Surr)	116		70 - 130

Lab Sample ID: LCSD 880-3227/2-A
Matrix: Solid
Analysis Batch: 3230

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3227

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.07130		mg/Kg					
Toluene	0.100	0.07872		mg/Kg					
Ethylbenzene	0.100	0.07830		mg/Kg					
m-Xylene & p-Xylene	0.200	0.1574		mg/Kg					
o-Xylene	0.100	0.07894		mg/Kg					

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)			
1,4-Difluorobenzene (Surr)			

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-692-1
SDG: TE012919259

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-3222/1-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3222

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130	05/19/21 08:44	05/19/21 10:13	1
o-Terphenyl	106		70 - 130	05/19/21 08:44	05/19/21 10:13	1

Lab Sample ID: LCS 880-3222/2-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3222

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	904.4		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1051		mg/Kg		105	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: LCSD 880-3222/3-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3222

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	888.8		mg/Kg		89	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	1109		mg/Kg		111	70 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	101		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3229/1-A
Matrix: Solid
Analysis Batch: 3252

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/19/21 15:29	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI I Combined

Job ID: 890-692-1
 SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3229/2-A
 Matrix: Solid
 Analysis Batch: 3252

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	253.8		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-3229/3-A
 Matrix: Solid
 Analysis Batch: 3252

Client Sample ID: Lab Control Sample Dup
 Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	254.3		mg/Kg		102	90 - 110	0	20

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-692-1
SDG: TE012919259

GC VOA

Prep Batch: 3227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-692-1	SW01	Total/NA	Solid	5035	
MB 880-3227/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3227/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3227/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-692-1	SW01	Total/NA	Solid	8021B	3227
MB 880-3227/5-A	Method Blank	Total/NA	Solid	8021B	3227
LCS 880-3227/1-A	Lab Control Sample	Total/NA	Solid	8021B	3227
LCSD 880-3227/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3227

GC Semi VOA

Prep Batch: 3222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-692-1	SW01	Total/NA	Solid	8015NM Prep	
MB 880-3222/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3222/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3222/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-692-1	SW01	Total/NA	Solid	8015B NM	3222
MB 880-3222/1-A	Method Blank	Total/NA	Solid	8015B NM	3222
LCS 880-3222/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3222
LCSD 880-3222/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3222

HPLC/IC

Leach Batch: 3229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-692-1	SW01	Soluble	Solid	DI Leach	
MB 880-3229/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 3252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-692-1	SW01	Soluble	Solid	300.0	3229
MB 880-3229/1-A	Method Blank	Soluble	Solid	300.0	3229
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	300.0	3229
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3229

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-692-1
SDG: TE012919259

Client Sample ID: SW01

Lab Sample ID: 890-692-1

Date Collected: 05/17/21 09:10

Matrix: Solid

Date Received: 05/18/21 15:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3227	05/19/21 09:21	KL	XEN MID
Total/NA	Analysis	8021B		1	3230	05/19/21 15:51	KL	XEN MID
Total/NA	Prep	8015NM Prep			3222	05/19/21 10:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3224	05/19/21 16:46	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		1	3252	05/19/21 17:54	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-692-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-692-1
SDG: TE012919259

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: JRU DI I Combined

Job ID: 890-692-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-692-1	SW01	Solid	05/17/21 09:10	05/18/21 15:04	0 - 8

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Environment Testing
Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: _____

www.xenco.com Page _____ of _____

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTELL
Company Name:	WSP USA	Company Name:	XTD ENERGY
Address:	3200 N A ST	Address:	3104 E GREENE ST
City, State ZIP:	MIDLAND, TX 79705	City, State ZIP:	CARLSBAD, NM 88220
Phone:	(501) 702-2329	Email:	anna.byers@wsp.com

Work Order Comments	
Program: UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>	
State of Project:	
Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>	
Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:	

Project Name:	JRU DE I Combined	Turn Around	Pres. Code
Project Number:	TEP12A1925A	<input type="checkbox"/> Routine <input checked="" type="checkbox"/> Rush	
Project Location:	EDDY COUNTY	Due Date:	Same day
Sampler's Name:	ANNA BYERS	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	PR-2264	Temp Blank:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
SAMPLE RECEIPT		Thermometer ID:	TUM-007
Samples Received Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Correction Factor:	-0.2
Cooler Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Temperature Reading:	1.4/1.2
Sample Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Corrected Temperature:	
Total Containers:		Parameters	



890-692 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	IPH (EPA 8415 Mod)	BTEX (EPA 8021 B)	Chloride (EPA 308.0)	Preservative Codes	Sample Comments
SUB 1	S	5/17/21	0910	0-8	Comp	1	X	X	X	None: NO Cool: Cool HCL: HCL H2SO4: H2 H3PO4: HP NaHSO4: NABIS Na2S2O3: NASO3 Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAPC	ACE: EW 2421 01559 EXP 01 COST CENTRE: 1082151001

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 TCLP / SPLP 6010: 8RCRA SD AS BA BE CD CR CU PB MN MO NI SE AG TI U Hg: 1631/245.1/7470/7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofinns Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofinns 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 Eurofinns Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofinns Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	5.18.21 1004			

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-692-1
SDG Number: TE012919259

Login Number: 692
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-692-1

SDG Number: TE012919259

Login Number: 692

List Number: 2

Creator: Copeland, Tatiana

List Source: Eurofins Xenco, Midland

List Creation: 05/19/21 02:23 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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Environment Testing
America

ANALYTICAL REPORT

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-693-1
Laboratory Sample Delivery Group: TE012919259
Client Project/Site: JRU DI I Combined
Revision: 1

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Dan Moir

Authorized for release by:
5/21/2021 2:29:07 PM

Jessica Kramer, Project Manager
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LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Laboratory Job ID: 890-693-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Qualifiers

GC VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins Xenco, Carlsbad

Case Narrative

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Job ID: 890-693-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-693-1

Comments

No additional comments.

Receipt

The samples were received on 5/18/2021 3:04 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 was 1.2° C.

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS23 (890-693-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS24 (890-693-3) and FS26 (890-693-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method 8015B NM: All quality control biased high indicating possible high bias in samples. All samples are non-detect under the implied high bias therefore the data has been qualified and reported.

(CCV 880-3220/30), (CCV 880-3220/44), (LCS 880-3250/2-A), (LCSD 880-3250/3-A), (890-693-A-1-F MS) and (890-693-A-1-G MSD)

Method 8015B NM: All quality control biased high indicating possible high bias in samples. All samples are non-detect under the implied high bias therefore the data has been qualified and reported.

FS30 (890-693-9), FS31 (890-693-10), FS32 (890-693-11), FS33 (890-693-12) and FS34 (890-693-13)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for 880-3258 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. The associated samples are: FS30 (890-693-9), FS31 (890-693-10), FS32 (890-693-11), FS33 (890-693-12) and FS34 (890-693-13).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS22

Lab Sample ID: 890-693-1

Date Collected: 05/17/21 15:10

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: 1 - 1.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/19/21 12:00	05/19/21 16:12	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/19/21 12:00	05/19/21 16:12	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/19/21 12:00	05/19/21 16:12	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/19/21 12:00	05/19/21 16:12	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/19/21 12:00	05/19/21 16:12	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/19/21 12:00	05/19/21 16:12	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/19/21 12:00	05/19/21 16:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	05/19/21 12:00	05/19/21 16:12	1
1,4-Difluorobenzene (Surr)	117		70 - 130	05/19/21 12:00	05/19/21 16:12	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/19/21 22:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U F1 **	49.9	mg/Kg		05/19/21 14:53	05/19/21 22:12	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/19/21 22:12	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/19/21 22:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	118		70 - 130	05/19/21 14:53	05/19/21 22:12	1
o-Terphenyl	140	S1+	70 - 130	05/19/21 14:53	05/19/21 22:12	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	129		25.0	mg/Kg			05/19/21 18:10	5

Client Sample ID: FS23

Lab Sample ID: 890-693-2

Date Collected: 05/17/21 15:15

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: - 1.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/21 12:00	05/19/21 16:32	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/21 12:00	05/19/21 16:32	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/21 12:00	05/19/21 16:32	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/19/21 12:00	05/19/21 16:32	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/21 12:00	05/19/21 16:32	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/19/21 12:00	05/19/21 16:32	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/19/21 12:00	05/19/21 16:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	05/19/21 12:00	05/19/21 16:32	1
1,4-Difluorobenzene (Surr)	119		70 - 130	05/19/21 12:00	05/19/21 16:32	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS23

Lab Sample ID: 890-693-2

Date Collected: 05/17/21 15:15

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: - 1.5

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/19/21 14:53	05/19/21 23:15	1
Diesel Range Organics (Over C10-C28)	<49.8	U **	49.8	mg/Kg		05/19/21 14:53	05/19/21 23:15	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/19/21 14:53	05/19/21 23:15	1
Total TPH	<49.8	U	49.8	mg/Kg		05/19/21 14:53	05/19/21 23:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130	05/19/21 14:53	05/19/21 23:15	1
o-Terphenyl	131	S1+	70 - 130	05/19/21 14:53	05/19/21 23:15	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	125		24.9	mg/Kg			05/19/21 18:15	5

Client Sample ID: FS24

Lab Sample ID: 890-693-3

Date Collected: 05/17/21 15:20

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: 1 - 1.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/21 12:00	05/19/21 16:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/21 12:00	05/19/21 16:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/21 12:00	05/19/21 16:53	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/19/21 12:00	05/19/21 16:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/21 12:00	05/19/21 16:53	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/19/21 12:00	05/19/21 16:53	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/19/21 12:00	05/19/21 16:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	05/19/21 12:00	05/19/21 16:53	1
1,4-Difluorobenzene (Surr)	111		70 - 130	05/19/21 12:00	05/19/21 16:53	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/19/21 14:53	05/19/21 23:36	1
Diesel Range Organics (Over C10-C28)	<49.8	U **	49.8	mg/Kg		05/19/21 14:53	05/19/21 23:36	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/19/21 14:53	05/19/21 23:36	1
Total TPH	<49.8	U	49.8	mg/Kg		05/19/21 14:53	05/19/21 23:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	119		70 - 130	05/19/21 14:53	05/19/21 23:36	1
o-Terphenyl	130		70 - 130	05/19/21 14:53	05/19/21 23:36	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	370		25.0	mg/Kg			05/19/21 18:20	5

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I CombinedJob ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS25

Lab Sample ID: 890-693-4

Date Collected: 05/17/21 15:25

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/19/21 12:00	05/19/21 17:14	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/19/21 12:00	05/19/21 17:14	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/19/21 12:00	05/19/21 17:14	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		05/19/21 12:00	05/19/21 17:14	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/19/21 12:00	05/19/21 17:14	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		05/19/21 12:00	05/19/21 17:14	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		05/19/21 12:00	05/19/21 17:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130	05/19/21 12:00	05/19/21 17:14	1
1,4-Difluorobenzene (Surr)	121		70 - 130	05/19/21 12:00	05/19/21 17:14	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/19/21 23:57	1
Diesel Range Organics (Over C10-C28)	<49.9	U **	49.9	mg/Kg		05/19/21 14:53	05/19/21 23:57	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/19/21 23:57	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/19/21 23:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	118		70 - 130	05/19/21 14:53	05/19/21 23:57	1
o-Terphenyl	134	S1+	70 - 130	05/19/21 14:53	05/19/21 23:57	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	373		5.05	mg/Kg			05/19/21 20:05	1

Client Sample ID: FS26

Lab Sample ID: 890-693-5

Date Collected: 05/17/21 15:30

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: 1 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/19/21 12:00	05/19/21 19:15	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/19/21 12:00	05/19/21 19:15	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/19/21 12:00	05/19/21 19:15	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		05/19/21 12:00	05/19/21 19:15	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/19/21 12:00	05/19/21 19:15	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		05/19/21 12:00	05/19/21 19:15	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		05/19/21 12:00	05/19/21 19:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	152	S1+	70 - 130	05/19/21 12:00	05/19/21 19:15	1
1,4-Difluorobenzene (Surr)	122		70 - 130	05/19/21 12:00	05/19/21 19:15	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I CombinedJob ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS26

Lab Sample ID: 890-693-5

Date Collected: 05/17/21 15:30

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: 1 - 3

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/20/21 00:18	1
Diesel Range Organics (Over C10-C28)	<49.9	U **	49.9	mg/Kg		05/19/21 14:53	05/20/21 00:18	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/20/21 00:18	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/20/21 00:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	125		70 - 130	05/19/21 14:53	05/20/21 00:18	1
o-Terphenyl	143	S1+	70 - 130	05/19/21 14:53	05/20/21 00:18	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	68.1		5.03	mg/Kg			05/19/21 20:10	1

Client Sample ID: FS27

Lab Sample ID: 890-693-6

Date Collected: 05/17/21 15:32

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: 1 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/19/21 14:30	05/19/21 14:43	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/19/21 14:30	05/19/21 14:43	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/19/21 14:30	05/19/21 14:43	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/19/21 14:30	05/19/21 14:43	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/19/21 14:30	05/19/21 14:43	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/19/21 14:30	05/19/21 14:43	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/19/21 14:30	05/19/21 14:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130	05/19/21 14:30	05/19/21 14:43	1
1,4-Difluorobenzene (Surr)	100		70 - 130	05/19/21 14:30	05/19/21 14:43	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/20/21 00:39	1
Diesel Range Organics (Over C10-C28)	<49.9	U **	49.9	mg/Kg		05/19/21 14:53	05/20/21 00:39	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/20/21 00:39	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/20/21 00:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	120		70 - 130	05/19/21 14:53	05/20/21 00:39	1
o-Terphenyl	138	S1+	70 - 130	05/19/21 14:53	05/20/21 00:39	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	64.4		4.98	mg/Kg			05/19/21 20:16	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I CombinedJob ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS28

Lab Sample ID: 890-693-7

Date Collected: 05/17/21 15:38

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: 3 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/19/21 14:30	05/19/21 15:03	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/19/21 14:30	05/19/21 15:03	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/19/21 14:30	05/19/21 15:03	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		05/19/21 14:30	05/19/21 15:03	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/19/21 14:30	05/19/21 15:03	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		05/19/21 14:30	05/19/21 15:03	1
Total BTEX	<0.00403	U	0.00403	mg/Kg		05/19/21 14:30	05/19/21 15:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	05/19/21 14:30	05/19/21 15:03	1
1,4-Difluorobenzene (Surr)	99		70 - 130	05/19/21 14:30	05/19/21 15:03	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 14:53	05/20/21 01:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U**	50.0	mg/Kg		05/19/21 14:53	05/20/21 01:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 14:53	05/20/21 01:00	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 14:53	05/20/21 01:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	123		70 - 130	05/19/21 14:53	05/20/21 01:00	1
o-Terphenyl	137	S1+	70 - 130	05/19/21 14:53	05/20/21 01:00	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.9		5.03	mg/Kg			05/19/21 18:42	1

Client Sample ID: FS29

Lab Sample ID: 890-693-8

Date Collected: 05/17/21 15:40

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: 1 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/19/21 14:30	05/19/21 15:24	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/19/21 14:30	05/19/21 15:24	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/19/21 14:30	05/19/21 15:24	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/19/21 14:30	05/19/21 15:24	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/19/21 14:30	05/19/21 15:24	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/19/21 14:30	05/19/21 15:24	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/19/21 14:30	05/19/21 15:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	05/19/21 14:30	05/19/21 15:24	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/19/21 14:30	05/19/21 15:24	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I CombinedJob ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS29

Lab Sample ID: 890-693-8

Date Collected: 05/17/21 15:40

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: 1 - 3

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 14:53	05/20/21 01:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U **	50.0	mg/Kg		05/19/21 14:53	05/20/21 01:21	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 14:53	05/20/21 01:21	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 14:53	05/20/21 01:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130	05/19/21 14:53	05/20/21 01:21	1
o-Terphenyl	126		70 - 130	05/19/21 14:53	05/20/21 01:21	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	64.3		5.05	mg/Kg			05/20/21 09:47	1

Client Sample ID: FS30

Lab Sample ID: 890-693-9

Date Collected: 05/17/21 15:45

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: 1 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/21 14:30	05/19/21 15:44	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/21 14:30	05/19/21 15:44	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/21 14:30	05/19/21 15:44	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/19/21 14:30	05/19/21 15:44	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/21 14:30	05/19/21 15:44	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/19/21 14:30	05/19/21 15:44	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/19/21 14:30	05/19/21 15:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	131	S1+	70 - 130	05/19/21 14:30	05/19/21 15:44	1
1,4-Difluorobenzene (Surr)	89		70 - 130	05/19/21 14:30	05/19/21 15:44	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/19/21 21:10	1
Diesel Range Organics (Over C10-C28)	<49.9	U **	49.9	mg/Kg		05/19/21 14:53	05/19/21 21:10	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/19/21 21:10	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/19/21 21:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130	05/19/21 14:53	05/19/21 21:10	1
o-Terphenyl	105		70 - 130	05/19/21 14:53	05/19/21 21:10	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	306	F1	25.0	mg/Kg			05/19/21 20:27	5

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I CombinedJob ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS31

Lab Sample ID: 890-693-10

Date Collected: 05/18/21 11:20

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/19/21 14:30	05/19/21 16:04	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/19/21 14:30	05/19/21 16:04	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/19/21 14:30	05/19/21 16:04	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/19/21 14:30	05/19/21 16:04	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/19/21 14:30	05/19/21 16:04	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/19/21 14:30	05/19/21 16:04	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/19/21 14:30	05/19/21 16:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	05/19/21 14:30	05/19/21 16:04	1
1,4-Difluorobenzene (Surr)	100		70 - 130	05/19/21 14:30	05/19/21 16:04	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 14:53	05/19/21 21:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U**	50.0	mg/Kg		05/19/21 14:53	05/19/21 21:30	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 14:53	05/19/21 21:30	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 14:53	05/19/21 21:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130	05/19/21 14:53	05/19/21 21:30	1
o-Terphenyl	107		70 - 130	05/19/21 14:53	05/19/21 21:30	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	342		4.96	mg/Kg			05/19/21 20:32	1

Client Sample ID: FS32

Lab Sample ID: 890-693-11

Date Collected: 05/18/21 11:15

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/19/21 14:30	05/19/21 16:25	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/19/21 14:30	05/19/21 16:25	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/19/21 14:30	05/19/21 16:25	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/19/21 14:30	05/19/21 16:25	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/19/21 14:30	05/19/21 16:25	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/19/21 14:30	05/19/21 16:25	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/19/21 14:30	05/19/21 16:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	05/19/21 14:30	05/19/21 16:25	1
1,4-Difluorobenzene (Surr)	99		70 - 130	05/19/21 14:30	05/19/21 16:25	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS32

Lab Sample ID: 890-693-11

Date Collected: 05/18/21 11:15

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: - 1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/19/21 14:53	05/19/21 21:51	1
Diesel Range Organics (Over C10-C28)	<49.8	U **	49.8	mg/Kg		05/19/21 14:53	05/19/21 21:51	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/19/21 14:53	05/19/21 21:51	1
Total TPH	<49.8	U	49.8	mg/Kg		05/19/21 14:53	05/19/21 21:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	05/19/21 14:53	05/19/21 21:51	1
o-Terphenyl	104		70 - 130	05/19/21 14:53	05/19/21 21:51	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	383		4.95	mg/Kg			05/19/21 20:38	1

Client Sample ID: FS33

Lab Sample ID: 890-693-12

Date Collected: 05/18/21 11:55

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/19/21 14:30	05/19/21 16:45	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/19/21 14:30	05/19/21 16:45	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/19/21 14:30	05/19/21 16:45	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		05/19/21 14:30	05/19/21 16:45	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/19/21 14:30	05/19/21 16:45	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		05/19/21 14:30	05/19/21 16:45	1
Total BTEX	<0.00397	U	0.00397	mg/Kg		05/19/21 14:30	05/19/21 16:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	05/19/21 14:30	05/19/21 16:45	1
1,4-Difluorobenzene (Surr)	96		70 - 130	05/19/21 14:30	05/19/21 16:45	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/19/21 22:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U **	49.9	mg/Kg		05/19/21 14:53	05/19/21 22:12	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/19/21 22:12	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/19/21 22:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130	05/19/21 14:53	05/19/21 22:12	1
o-Terphenyl	97		70 - 130	05/19/21 14:53	05/19/21 22:12	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	84.4		5.04	mg/Kg			05/19/21 20:43	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS34

Lab Sample ID: 890-693-13

Date Collected: 05/18/21 11:50

Matrix: Solid

Date Received: 05/18/21 15:04

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/19/21 14:30	05/19/21 17:06	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/19/21 14:30	05/19/21 17:06	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/19/21 14:30	05/19/21 17:06	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		05/19/21 14:30	05/19/21 17:06	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/19/21 14:30	05/19/21 17:06	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		05/19/21 14:30	05/19/21 17:06	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		05/19/21 14:30	05/19/21 17:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	05/19/21 14:30	05/19/21 17:06	1
1,4-Difluorobenzene (Surr)	100		70 - 130	05/19/21 14:30	05/19/21 17:06	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/19/21 22:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U **	49.9	mg/Kg		05/19/21 14:53	05/19/21 22:33	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/19/21 22:33	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 14:53	05/19/21 22:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130	05/19/21 14:53	05/19/21 22:33	1
o-Terphenyl	100		70 - 130	05/19/21 14:53	05/19/21 22:33	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	187		5.02	mg/Kg			05/19/21 20:48	1

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-693-1	FS22	98	117
890-693-2	FS23	106	119
890-693-3	FS24	99	111
890-693-4	FS25	93	121
890-693-5	FS26	152 S1+	122
890-693-6	FS27	116	100
890-693-7	FS28	109	99
890-693-8	FS29	109	98
890-693-9	FS30	131 S1+	89
890-693-10	FS31	109	100
890-693-11	FS32	111	99
890-693-12	FS33	112	96
890-693-13	FS34	109	100
LCS 880-3223/1-A	Lab Control Sample	100	93
LCS 880-3227/1-A	Lab Control Sample	92	116
LCSD 880-3223/2-A	Lab Control Sample Dup	99	94
LCSD 880-3227/2-A	Lab Control Sample Dup	89	108
MB 880-3223/5-A	Method Blank	106	91
MB 880-3227/5-A	Method Blank	106	99

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-693-1	FS22	118	140 S1+
890-693-1 MS	FS22	120	116
890-693-1 MSD	FS22	121	120
890-693-2	FS23	114	131 S1+
890-693-3	FS24	119	130
890-693-4	FS25	118	134 S1+
890-693-5	FS26	125	143 S1+
890-693-6	FS27	120	138 S1+
890-693-7	FS28	123	137 S1+
890-693-8	FS29	111	126
890-693-9	FS30	93	105
890-693-10	FS31	99	107
890-693-11	FS32	96	104
890-693-12	FS33	86	97
890-693-13	FS34	87	100
LCS 880-3250/2-A	Lab Control Sample	108	109
LCSD 880-3250/3-A	Lab Control Sample Dup	114	113
MB 880-3250/1-A	Method Blank	111	132 S1+

Surrogate Legend

1CO = 1-Chlorooctane

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined
OTPH = o-Terphenyl

Job ID: 890-693-1
SDG: TE012919259

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3223/5-A
Matrix: Solid
Analysis Batch: 3232

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3223

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/21 08:58	05/19/21 12:42	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/21 08:58	05/19/21 12:42	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/21 08:58	05/19/21 12:42	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/19/21 08:58	05/19/21 12:42	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/21 08:58	05/19/21 12:42	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/19/21 08:58	05/19/21 12:42	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/19/21 08:58	05/19/21 12:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	05/19/21 08:58	05/19/21 12:42	1
1,4-Difluorobenzene (Surr)	91		70 - 130	05/19/21 08:58	05/19/21 12:42	1

Lab Sample ID: LCS 880-3223/1-A
Matrix: Solid
Analysis Batch: 3232

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3223

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09271		mg/Kg		93	70 - 130
Toluene	0.100	0.1156		mg/Kg		116	70 - 130
Ethylbenzene	0.100	0.1164		mg/Kg		116	70 - 130
m-Xylene & p-Xylene	0.200	0.2404		mg/Kg		120	70 - 130
o-Xylene	0.100	0.1163		mg/Kg		116	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

Lab Sample ID: LCSD 880-3223/2-A
Matrix: Solid
Analysis Batch: 3232

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3223

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.09617		mg/Kg		96	70 - 130	4	35
Toluene	0.100	0.1154		mg/Kg		115	70 - 130	0	35
Ethylbenzene	0.100	0.1159		mg/Kg		116	70 - 130	0	35
m-Xylene & p-Xylene	0.200	0.2367		mg/Kg		118	70 - 130	2	35
o-Xylene	0.100	0.1149		mg/Kg		115	70 - 130	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: MB 880-3227/5-A
Matrix: Solid
Analysis Batch: 3230

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3227

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-3227/5-A
Matrix: Solid
Analysis Batch: 3230

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3227

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 12:41	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/19/21 09:21	05/19/21 12:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	05/19/21 09:21	05/19/21 12:41	1
1,4-Difluorobenzene (Surr)	99		70 - 130	05/19/21 09:21	05/19/21 12:41	1

Lab Sample ID: LCS 880-3227/1-A
Matrix: Solid
Analysis Batch: 3230

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3227

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07413		mg/Kg		74	70 - 130
Toluene	0.100	0.08170		mg/Kg		82	70 - 130
Ethylbenzene	0.100	0.08134		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	0.200	0.1595		mg/Kg		80	70 - 130
o-Xylene	0.100	0.08025		mg/Kg		80	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		70 - 130
1,4-Difluorobenzene (Surr)	116		70 - 130

Lab Sample ID: LCSD 880-3227/2-A
Matrix: Solid
Analysis Batch: 3230

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3227

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.1127	*1	mg/Kg		113	70 - 130	41	35
Toluene	0.100	0.1189	*1	mg/Kg		119	70 - 130	37	35
Ethylbenzene	0.100	0.1156		mg/Kg		116	70 - 130	35	35
m-Xylene & p-Xylene	0.200	0.2307	*1	mg/Kg		115	70 - 130	36	35
o-Xylene	0.100	0.1102		mg/Kg		110	70 - 130	31	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	89		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-3250/1-A
Matrix: Solid
Analysis Batch: 3220

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3250

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/19/21 14:53	05/19/21 21:10	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/19/21 14:53	05/19/21 21:10	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/19/21 14:53	05/19/21 21:10	1
Total TPH	<49.8	U	49.8	mg/Kg		05/19/21 14:53	05/19/21 21:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130	05/19/21 14:53	05/19/21 21:10	1
o-Terphenyl	132	S1+	70 - 130	05/19/21 14:53	05/19/21 21:10	1

Lab Sample ID: LCS 880-3250/2-A
Matrix: Solid
Analysis Batch: 3220

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3250

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	992	984.0		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)	992	1231		mg/Kg		124	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: LCSD 880-3250/3-A
Matrix: Solid
Analysis Batch: 3220

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3250

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	989	1030		mg/Kg		104	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	989	1298	*+	mg/Kg		131	70 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	114		70 - 130
o-Terphenyl	113		70 - 130

Lab Sample ID: 890-693-1 MS
Matrix: Solid
Analysis Batch: 3220

Client Sample ID: FS22
Prep Type: Total/NA
Prep Batch: 3250

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	1081		mg/Kg		108	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1 *+	996	1402	F1	mg/Kg		141	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 890-693-1 MS
Matrix: Solid
Analysis Batch: 3220

Client Sample ID: FS22
Prep Type: Total/NA
Prep Batch: 3250

Surrogate	%Recovery	MS MS Qualifier	Limits
1-Chlorooctane	120		70 - 130
o-Terphenyl	116		70 - 130

Lab Sample ID: 890-693-1 MSD
Matrix: Solid
Analysis Batch: 3220

Client Sample ID: FS22
Prep Type: Total/NA
Prep Batch: 3250

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	1101		mg/Kg		111	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1 **	996	1419	F1	mg/Kg		142	70 - 130	1	20

Surrogate	%Recovery	MSD MSD Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	120		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3229/1-A
Matrix: Solid
Analysis Batch: 3252

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/19/21 15:29	1

Lab Sample ID: LCS 880-3229/2-A
Matrix: Solid
Analysis Batch: 3252

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	253.8		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-3229/3-A
Matrix: Solid
Analysis Batch: 3252

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	254.3		mg/Kg		102	90 - 110	0	20

Lab Sample ID: MB 880-3231/1-A
Matrix: Solid
Analysis Batch: 3258

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/19/21 17:36	1

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QC Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3231/2-A
Matrix: Solid
Analysis Batch: 3258

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	255.0		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-3231/3-A
Matrix: Solid
Analysis Batch: 3258

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	254.5		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-693-9 MS
Matrix: Solid
Analysis Batch: 3258

Client Sample ID: FS30
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	306	F1	250	250.9	F1	mg/Kg		-22	90 - 110

Lab Sample ID: 890-693-9 MSD
Matrix: Solid
Analysis Batch: 3258

Client Sample ID: FS30
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	306	F1	250	250.6	F1	mg/Kg		-22	90 - 110	0	20

Lab Sample ID: MB 880-3235/1-A
Matrix: Solid
Analysis Batch: 3259

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/19/21 21:19	1

Lab Sample ID: LCS 880-3235/2-A
Matrix: Solid
Analysis Batch: 3259

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	253.5		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-3235/3-A
Matrix: Solid
Analysis Batch: 3259

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	249.6		mg/Kg		100	90 - 110	2	20

Lab Sample ID: MB 880-3275/1-A
Matrix: Solid
Analysis Batch: 3295

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/20/21 17:33	1

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QC Sample Results

Client: WSP USA Inc.
 Project/Site: JRU DI I Combined

Job ID: 890-693-1
 SDG: TE012919259

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 880-3275/2-A
Matrix: Solid
Analysis Batch: 3295

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	255.1		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-3275/3-A
Matrix: Solid
Analysis Batch: 3295

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	252.4		mg/Kg		101	90 - 110	1	20

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

GC VOA

Prep Batch: 3223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-693-6	FS27	Total/NA	Solid	5035	
890-693-7	FS28	Total/NA	Solid	5035	
890-693-8	FS29	Total/NA	Solid	5035	
890-693-9	FS30	Total/NA	Solid	5035	
890-693-10	FS31	Total/NA	Solid	5035	
890-693-11	FS32	Total/NA	Solid	5035	
890-693-12	FS33	Total/NA	Solid	5035	
890-693-13	FS34	Total/NA	Solid	5035	
MB 880-3223/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3223/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3223/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 3227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-693-1	FS22	Total/NA	Solid	5035	
890-693-2	FS23	Total/NA	Solid	5035	
890-693-3	FS24	Total/NA	Solid	5035	
890-693-4	FS25	Total/NA	Solid	5035	
890-693-5	FS26	Total/NA	Solid	5035	
MB 880-3227/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3227/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3227/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-693-1	FS22	Total/NA	Solid	8021B	3227
890-693-2	FS23	Total/NA	Solid	8021B	3227
890-693-3	FS24	Total/NA	Solid	8021B	3227
890-693-4	FS25	Total/NA	Solid	8021B	3227
890-693-5	FS26	Total/NA	Solid	8021B	3227
MB 880-3227/5-A	Method Blank	Total/NA	Solid	8021B	3227
LCS 880-3227/1-A	Lab Control Sample	Total/NA	Solid	8021B	3227
LCSD 880-3227/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3227

Analysis Batch: 3232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-693-6	FS27	Total/NA	Solid	8021B	3223
890-693-7	FS28	Total/NA	Solid	8021B	3223
890-693-8	FS29	Total/NA	Solid	8021B	3223
890-693-9	FS30	Total/NA	Solid	8021B	3223
890-693-10	FS31	Total/NA	Solid	8021B	3223
890-693-11	FS32	Total/NA	Solid	8021B	3223
890-693-12	FS33	Total/NA	Solid	8021B	3223
890-693-13	FS34	Total/NA	Solid	8021B	3223
MB 880-3223/5-A	Method Blank	Total/NA	Solid	8021B	3223
LCS 880-3223/1-A	Lab Control Sample	Total/NA	Solid	8021B	3223
LCSD 880-3223/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3223

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI I CombinedJob ID: 890-693-1
SDG: TE012919259

GC Semi VOA

Analysis Batch: 3220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-693-1	FS22	Total/NA	Solid	8015B NM	3250
890-693-2	FS23	Total/NA	Solid	8015B NM	3250
890-693-3	FS24	Total/NA	Solid	8015B NM	3250
890-693-4	FS25	Total/NA	Solid	8015B NM	3250
890-693-5	FS26	Total/NA	Solid	8015B NM	3250
890-693-6	FS27	Total/NA	Solid	8015B NM	3250
890-693-7	FS28	Total/NA	Solid	8015B NM	3250
890-693-8	FS29	Total/NA	Solid	8015B NM	3250
MB 880-3250/1-A	Method Blank	Total/NA	Solid	8015B NM	3250
LCS 880-3250/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3250
LCS 880-3250/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3250
890-693-1 MS	FS22	Total/NA	Solid	8015B NM	3250
890-693-1 MSD	FS22	Total/NA	Solid	8015B NM	3250

Analysis Batch: 3224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-693-9	FS30	Total/NA	Solid	8015B NM	3250
890-693-10	FS31	Total/NA	Solid	8015B NM	3250
890-693-11	FS32	Total/NA	Solid	8015B NM	3250
890-693-12	FS33	Total/NA	Solid	8015B NM	3250
890-693-13	FS34	Total/NA	Solid	8015B NM	3250

Prep Batch: 3250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-693-1	FS22	Total/NA	Solid	8015NM Prep	
890-693-2	FS23	Total/NA	Solid	8015NM Prep	
890-693-3	FS24	Total/NA	Solid	8015NM Prep	
890-693-4	FS25	Total/NA	Solid	8015NM Prep	
890-693-5	FS26	Total/NA	Solid	8015NM Prep	
890-693-6	FS27	Total/NA	Solid	8015NM Prep	
890-693-7	FS28	Total/NA	Solid	8015NM Prep	
890-693-8	FS29	Total/NA	Solid	8015NM Prep	
890-693-9	FS30	Total/NA	Solid	8015NM Prep	
890-693-10	FS31	Total/NA	Solid	8015NM Prep	
890-693-11	FS32	Total/NA	Solid	8015NM Prep	
890-693-12	FS33	Total/NA	Solid	8015NM Prep	
890-693-13	FS34	Total/NA	Solid	8015NM Prep	
MB 880-3250/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3250/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCS 880-3250/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-693-1 MS	FS22	Total/NA	Solid	8015NM Prep	
890-693-1 MSD	FS22	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 3229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-693-1	FS22	Soluble	Solid	DI Leach	
890-693-2	FS23	Soluble	Solid	DI Leach	
890-693-3	FS24	Soluble	Solid	DI Leach	
890-693-4	FS25	Soluble	Solid	DI Leach	

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QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

HPLC/IC (Continued)

Leach Batch: 3229 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-693-5	FS26	Soluble	Solid	DI Leach	
890-693-6	FS27	Soluble	Solid	DI Leach	
890-693-7	FS28	Soluble	Solid	DI Leach	
MB 880-3229/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Leach Batch: 3231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-693-9	FS30	Soluble	Solid	DI Leach	
890-693-10	FS31	Soluble	Solid	DI Leach	
890-693-11	FS32	Soluble	Solid	DI Leach	
890-693-12	FS33	Soluble	Solid	DI Leach	
890-693-13	FS34	Soluble	Solid	DI Leach	
MB 880-3231/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3231/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3231/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-693-9 MS	FS30	Soluble	Solid	DI Leach	
890-693-9 MSD	FS30	Soluble	Solid	DI Leach	

Leach Batch: 3235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-693-8	FS29	Soluble	Solid	DI Leach	
MB 880-3235/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3235/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3235/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 3252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-693-1	FS22	Soluble	Solid	300.0	3229
890-693-2	FS23	Soluble	Solid	300.0	3229
890-693-3	FS24	Soluble	Solid	300.0	3229
890-693-4	FS25	Soluble	Solid	300.0	3229
890-693-5	FS26	Soluble	Solid	300.0	3229
890-693-6	FS27	Soluble	Solid	300.0	3229
890-693-7	FS28	Soluble	Solid	300.0	3229
MB 880-3229/1-A	Method Blank	Soluble	Solid	300.0	3229
LCS 880-3229/2-A	Lab Control Sample	Soluble	Solid	300.0	3229
LCSD 880-3229/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3229

Analysis Batch: 3258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-693-9	FS30	Soluble	Solid	300.0	3231
890-693-10	FS31	Soluble	Solid	300.0	3231
890-693-11	FS32	Soluble	Solid	300.0	3231
890-693-12	FS33	Soluble	Solid	300.0	3231
890-693-13	FS34	Soluble	Solid	300.0	3231
MB 880-3231/1-A	Method Blank	Soluble	Solid	300.0	3231
LCS 880-3231/2-A	Lab Control Sample	Soluble	Solid	300.0	3231
LCSD 880-3231/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3231
890-693-9 MS	FS30	Soluble	Solid	300.0	3231

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

HPLC/IC (Continued)

Analysis Batch: 3258 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-693-9 MSD	FS30	Soluble	Solid	300.0	3231

Analysis Batch: 3259

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-693-8	FS29	Soluble	Solid	300.0	3235
MB 880-3235/1-A	Method Blank	Soluble	Solid	300.0	3235
LCS 880-3235/2-A	Lab Control Sample	Soluble	Solid	300.0	3235
LCSD 880-3235/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3235

Leach Batch: 3275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-3275/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3275/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3275/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 3295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-3275/1-A	Method Blank	Soluble	Solid	300.0	3275
LCS 880-3275/2-A	Lab Control Sample	Soluble	Solid	300.0	3275
LCSD 880-3275/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3275

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS22

Date Collected: 05/17/21 15:10

Date Received: 05/18/21 15:04

Lab Sample ID: 890-693-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3227	05/19/21 12:00	KL	XEN MID
Total/NA	Analysis	8021B		1	3230	05/19/21 16:12	KL	XEN MID
Total/NA	Prep	8015NM Prep			3250	05/19/21 14:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3220	05/19/21 22:12	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		5	3252	05/19/21 18:10	CH	XEN MID

Client Sample ID: FS23

Date Collected: 05/17/21 15:15

Date Received: 05/18/21 15:04

Lab Sample ID: 890-693-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3227	05/19/21 12:00	KL	XEN MID
Total/NA	Analysis	8021B		1	3230	05/19/21 16:32	KL	XEN MID
Total/NA	Prep	8015NM Prep			3250	05/19/21 14:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3220	05/19/21 23:15	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		5	3252	05/19/21 18:15	CH	XEN MID

Client Sample ID: FS24

Date Collected: 05/17/21 15:20

Date Received: 05/18/21 15:04

Lab Sample ID: 890-693-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3227	05/19/21 12:00	KL	XEN MID
Total/NA	Analysis	8021B		1	3230	05/19/21 16:53	KL	XEN MID
Total/NA	Prep	8015NM Prep			3250	05/19/21 14:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3220	05/19/21 23:36	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		5	3252	05/19/21 18:20	CH	XEN MID

Client Sample ID: FS25

Date Collected: 05/17/21 15:25

Date Received: 05/18/21 15:04

Lab Sample ID: 890-693-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3227	05/19/21 12:00	KL	XEN MID
Total/NA	Analysis	8021B		1	3230	05/19/21 17:14	KL	XEN MID
Total/NA	Prep	8015NM Prep			3250	05/19/21 14:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3220	05/19/21 23:57	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		1	3252	05/19/21 20:05	CH	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS26

Lab Sample ID: 890-693-5

Date Collected: 05/17/21 15:30

Matrix: Solid

Date Received: 05/18/21 15:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3227	05/19/21 12:00	KL	XEN MID
Total/NA	Analysis	8021B		1	3230	05/19/21 19:15	KL	XEN MID
Total/NA	Prep	8015NM Prep			3250	05/19/21 14:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3220	05/20/21 00:18	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		1	3252	05/19/21 20:10	CH	XEN MID

Client Sample ID: FS27

Lab Sample ID: 890-693-6

Date Collected: 05/17/21 15:32

Matrix: Solid

Date Received: 05/18/21 15:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3223	05/19/21 14:30	MR	XEN MID
Total/NA	Analysis	8021B		1	3232	05/19/21 14:43	MR	XEN MID
Total/NA	Prep	8015NM Prep			3250	05/19/21 14:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3220	05/20/21 00:39	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		1	3252	05/19/21 20:16	CH	XEN MID

Client Sample ID: FS28

Lab Sample ID: 890-693-7

Date Collected: 05/17/21 15:38

Matrix: Solid

Date Received: 05/18/21 15:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3223	05/19/21 14:30	MR	XEN MID
Total/NA	Analysis	8021B		1	3232	05/19/21 15:03	MR	XEN MID
Total/NA	Prep	8015NM Prep			3250	05/19/21 14:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3220	05/20/21 01:00	AJ	XEN MID
Soluble	Leach	DI Leach			3229	05/19/21 09:27	CH	XEN MID
Soluble	Analysis	300.0		1	3252	05/19/21 18:42	CH	XEN MID

Client Sample ID: FS29

Lab Sample ID: 890-693-8

Date Collected: 05/17/21 15:40

Matrix: Solid

Date Received: 05/18/21 15:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3223	05/19/21 14:30	MR	XEN MID
Total/NA	Analysis	8021B		1	3232	05/19/21 15:24	MR	XEN MID
Total/NA	Prep	8015NM Prep			3250	05/19/21 14:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3220	05/20/21 01:21	AJ	XEN MID
Soluble	Leach	DI Leach			3235	05/19/21 15:00	CH	XEN MID
Soluble	Analysis	300.0		1	3259	05/20/21 09:47	SC	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS30

Lab Sample ID: 890-693-9

Date Collected: 05/17/21 15:45

Matrix: Solid

Date Received: 05/18/21 15:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3223	05/19/21 14:30	MR	XEN MID
Total/NA	Analysis	8021B		1	3232	05/19/21 15:44	MR	XEN MID
Total/NA	Prep	8015NM Prep			3250	05/19/21 14:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3224	05/19/21 21:10	AJ	XEN MID
Soluble	Leach	DI Leach			3231	05/19/21 09:31	CH	XEN MID
Soluble	Analysis	300.0		5	3258	05/19/21 20:27	SC	XEN MID

Client Sample ID: FS31

Lab Sample ID: 890-693-10

Date Collected: 05/18/21 11:20

Matrix: Solid

Date Received: 05/18/21 15:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3223	05/19/21 14:30	MR	XEN MID
Total/NA	Analysis	8021B		1	3232	05/19/21 16:04	MR	XEN MID
Total/NA	Prep	8015NM Prep			3250	05/19/21 14:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3224	05/19/21 21:30	AJ	XEN MID
Soluble	Leach	DI Leach			3231	05/19/21 09:31	CH	XEN MID
Soluble	Analysis	300.0		1	3258	05/19/21 20:32	SC	XEN MID

Client Sample ID: FS32

Lab Sample ID: 890-693-11

Date Collected: 05/18/21 11:15

Matrix: Solid

Date Received: 05/18/21 15:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3223	05/19/21 14:30	MR	XEN MID
Total/NA	Analysis	8021B		1	3232	05/19/21 16:25	MR	XEN MID
Total/NA	Prep	8015NM Prep			3250	05/19/21 14:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3224	05/19/21 21:51	AJ	XEN MID
Soluble	Leach	DI Leach			3231	05/19/21 09:31	CH	XEN MID
Soluble	Analysis	300.0		1	3258	05/19/21 20:38	SC	XEN MID

Client Sample ID: FS33

Lab Sample ID: 890-693-12

Date Collected: 05/18/21 11:55

Matrix: Solid

Date Received: 05/18/21 15:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3223	05/19/21 14:30	MR	XEN MID
Total/NA	Analysis	8021B		1	3232	05/19/21 16:45	MR	XEN MID
Total/NA	Prep	8015NM Prep			3250	05/19/21 14:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3224	05/19/21 22:12	AJ	XEN MID
Soluble	Leach	DI Leach			3231	05/19/21 09:31	CH	XEN MID
Soluble	Analysis	300.0		1	3258	05/19/21 20:43	SC	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS34
Date Collected: 05/18/21 11:50
Date Received: 05/18/21 15:04

Lab Sample ID: 890-693-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3223	05/19/21 14:30	MR	XEN MID
Total/NA	Analysis	8021B		1	3232	05/19/21 17:06	MR	XEN MID
Total/NA	Prep	8015NM Prep			3250	05/19/21 14:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3224	05/19/21 22:33	AJ	XEN MID
Soluble	Leach	DI Leach			3231	05/19/21 09:31	CH	XEN MID
Soluble	Analysis	300.0		1	3258	05/19/21 20:48	SC	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

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Method Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

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

Eurofins Xenco, Carlsbad

Sample Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-693-1	FS22	Solid	05/17/21 15:10	05/18/21 15:04	1 - 1.5
890-693-2	FS23	Solid	05/17/21 15:15	05/18/21 15:04	- 1.5
890-693-3	FS24	Solid	05/17/21 15:20	05/18/21 15:04	1 - 1.5
890-693-4	FS25	Solid	05/17/21 15:25	05/18/21 15:04	- 1
890-693-5	FS26	Solid	05/17/21 15:30	05/18/21 15:04	1 - 3
890-693-6	FS27	Solid	05/17/21 15:32	05/18/21 15:04	1 - 3
890-693-7	FS28	Solid	05/17/21 15:38	05/18/21 15:04	3 - 4
890-693-8	FS29	Solid	05/17/21 15:40	05/18/21 15:04	1 - 3
890-693-9	FS30	Solid	05/17/21 15:45	05/18/21 15:04	1 - 3
890-693-10	FS31	Solid	05/18/21 11:20	05/18/21 15:04	- 1
890-693-11	FS32	Solid	05/18/21 11:15	05/18/21 15:04	- 1
890-693-12	FS33	Solid	05/18/21 11:55	05/18/21 15:04	- 1
890-693-13	FS34	Solid	05/18/21 11:50	05/18/21 15:04	- 1

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Environment Testing
Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: _____

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Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTELL
Company Name:	WSP USA	Company Name:	XTD ENERGY
Address:	3300 N A ST	Address:	3104 E GREENE ST
City, State ZIP:	MIDLAND, TX 79705	City, State ZIP:	CARLSBAD, NM 88220
Phone:	(817) 702-2329	Email:	anna.byers@wsp.com

Program: UST/PST	<input type="checkbox"/> PRP	<input type="checkbox"/> Brownfields	<input type="checkbox"/> RRC	<input type="checkbox"/> Superfund
State of Project:				
Reporting: Level II	<input type="checkbox"/>	Level III	<input type="checkbox"/>	PST/UST
Level IV	<input type="checkbox"/>	TRRP	<input type="checkbox"/>	Level IV
Deliverables: EDD	<input type="checkbox"/>	ADAPT	<input type="checkbox"/>	Other:

Project Name:	JPUDI Combined	Turn Around	<input type="checkbox"/> Routine	<input checked="" type="checkbox"/> Rush	Pres. Code	
Project Number:	TEP2A1925A	Due Date:	Same day	TAT starts the day received by the lab, if received by 4:30pm		
Project Location:	EDDY COUNTY	Sampler's Name:	ANNA BYERS	Temp Blank:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
PO #:	28P-4625	Thermometer ID:	1-4711.2	Well Ice:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
SAMPLE RECEIPT	Temp Blank:	Correction Factor:	-0.2	Temperature Reading:		
Samples Received In tact:	<input checked="" type="checkbox"/> Yes	Corrected Temperature:				
Cooler Custody Seals:	<input checked="" type="checkbox"/> Yes					
Sample Custody Seals:	<input checked="" type="checkbox"/> Yes					
Total Containers:						



890-693 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters			Sample Comments
							TPH (EPA 815 mcl)	BTEX (EPA 8021 B)	Chloride (EPA 300.0)	
FS22	S	5/17/21	1510	1-5'	Emp	1				ACE:
FS23			1515	1-5'		1				EW2421, \$1559, EXP. 01
FS24			1520	1-1.5'		1				
FS25			1525	1'		1				COST CENTRE:
FS26			1530	1-3'		1				1082151001
FS27			1532	1-3'		1				
FS28			1538	3-4'		1				
FS29			1540	1-3'		1				
FS30			1545	1-3'		1				
FS31			5/18/21	1120		1				

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SIO, Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed: TCPP/PPCP/010-8RCRA SD AS BA BE CD CR CO CU PB MN MO NI SE AG TI U Hg: 1631 / 245.1 / 7470 / 7471

Notes: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins 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 Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Anna Byers</i>	<i>Joe Culp</i>	5.18.21 1504			



Environment Testing
Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: _____

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Page 2 of 2

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTELL
Company Name:	WSP USA	Company Name:	XTD ENERGY
Address:	3380 N A ST	Address:	3404 E. GREENE ST
City, State ZIP:	MIDLAND, TX 79705	City, State ZIP:	CARLSBAD, NM 88224
Phone:	(817) 702-2329	Email:	anna.bryers@wsp.com

Program:	UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting:	Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>
Deliverables:	EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: _____

Project Name:	JRU DE 1 Combined	Turn Around	Pres. Code	ANALYSIS REQUEST	Preservative Codes
Project Number:	TEP12A1925A	<input type="checkbox"/> Routine <input checked="" type="checkbox"/> Rush			None: NO DI Water: H ₂ O
Project Location:	EDDY COUNTY	Due Date:	Same day		Cool: Cool MeOH: Me
Sampler's Name:	ANNA BRYERS	*FAT starts the day received by the lab, if received by 4:30pm			HCL: HC HNO ₃ : HN
PO #:	220-41025	Temp Blank:	Yes No	Wet Ice:	Yes No
SAMPLE RECEIPT		Samples Received Intact:	Yes No	Thermometer ID:	
		Cooler Received Seals:	Yes No	Correction Factor:	
		Sample Custody Seals:	Yes No	Temperature Reading:	
		Total Containers:	Yes No	Corrected Temperature:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters	Sample Comments
FS32	S	5/18/21	1155	1'	Comp	1	TPH (EPA 8151 mod)	ACE:
FS33	S	5/18/21	1155	1'	Comp	1	BTEX (EPA 8021 B)	EW 2421 01559 EXP 01
FS34	S	5/18/21	1158	1'	Comp	1	Chloride (EPA 348.0)	COST CENTRE: 1082151801

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Tl Sn U V Zn
 TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins 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 Eurofins Xenco. A minimum charge of \$50.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	5.18.21.1504			

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Eurofins Xenco, Carlsbad

1089 N Canal St
 Carlsbad NM 88220
 Phone 575-988-3199 Fax: 575-988-3199

Chain of Custody Record



Environment Testing
 America

Client Information (Sub Contract Lab)

Client Contact: **Shelby/Receiving**
 Company: **Eurofins Xenco**
 Address: **1211 W Florida Ave**
 City: **Midland**
 State, Zip: **TX, 79701**
 Phone: **432-704-6440(Tel)**
 Email:
 Project Name: **JRO DI Combined**
 Site: **JRO DI Combined**

Sampler: **Kramer Jessica**
 Phone: **Jessica.kramer@eurofinsnet.com**
 E-Mail: **Jessica.kramer@eurofinsnet.com**
 Lab PM: **Jessica.kramer@eurofinsnet.com**
 Carrier Tracking No(s): **NE LAP - Louisiana, NE LAP - Texas**
 State of Origin: **New Mexico**
 COC No: **890-223-1**
 Page: **Page 1 of 2**
 Job #: **890-693-1**

Due Date Requested: **5/20/2021**
 TAT Requested (days):
 Analysis Requested:
 Preservation Codes: **A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDTA, M Hexane, N None, O AsHClO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Z other (Specify)**

Sample Identification - Client ID (Lab ID)

Sample ID	Sample Date	Sample Time	Sample Type (G=Comp, G=Grab)	Matrix (W=Water, S=solid, O=Oils, B=Trace, A=All)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:
FS22 (890-693-1)	5/17/21	15 10	Mountain	Solid	X	8016MOD_NM/8016NM_S_Prep Full TPH	1	
FS23 (890-693-2)	5/17/21	15 15	Mountain	Solid	X	300_ORGFm_28D/DI_LEACH Chloride	1	
FS24 (890-693-3)	5/17/21	15 20	Mountain	Solid	X	8021B/6036FP_Calc BTEX	1	
FS25 (890-693-4)	5/17/21	15 25	Mountain	Solid	X		1	
FS26 (890-693-5)	5/17/21	15 30	Mountain	Solid	X		1	
FS27 (890-693-6)	5/17/21	15 32	Mountain	Solid	X		1	
FS28 (890-693-7)	5/17/21	15 38	Mountain	Solid	X		1	
FS29 (890-693-8)	5/17/21	15 40	Mountain	Solid	X		1	
FS30 (890-693-9)	5/17/21	15 45	Mountain	Solid	X		1	

Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon our subcontracted laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/assessments/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.

Possible Hazard Identification

Unconfirmed: Deliverable Requested I, II, III, IV Other (specify) **Primary Deliverable Rank 2** Special Instructions/QC Requirements Return To Client Disposal By Lab Archive For **Months**

Empty Kit Relinquished by: **Date:** **Time:** **Date:** **Time:** **Method of Shipment:**

Relinquished by: **Joe Culp** **5.19.21** **Company:** **Received by:** **5-19-21 2:30 PM** **Company:**

Relinquished by: **Date/Time:** **Company:** **Received by:** **Date/Time:** **Company:**

Custody Seals Intact Yes No **Custody Seal No** **Coder Temperature(s) °C and Other Remarks**

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-693-1
SDG Number: TE012919259

Login Number: 693
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-693-1
SDG Number: TE012919259

Login Number: 693
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Xenco, Midland
List Creation: 05/19/21 02:24 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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WSP USA

3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

July 29, 2021

New Mexico Oil Conservation Division
District 2
811 South First Street
Artesia, New Mexico 88210

**RE: Closure and Deferral Request
James Ranch Unit Drilling Island 1
XTO Energy, Inc.
Incident Numbers: nHMP1416331258, nHMP1411836637, nAB1422639350,
nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102,
nAB1611933379, nAB1625130938, nAB1736044200, nAB1805036031
nAB1814128830 NRM2006432204, NRM2011445697, NRM2011535196,
NRM2011559899, NRM1935433078 and NRM2002747253
Eddy County, New Mexico**

To Whom It May Concern:

WSP USA Inc. (WSP), on behalf of XTO Energy, Inc. (XTO), presents the following Closure and Deferral Request following execution of the Remediation Work Plans that were approved by the New Mexico Oil Conservation Division (NMOCD) for this location on December 10 and 11, 2020. This report provides an summary to the remediation activities completed at the James Ranch Unit Drilling Island 1 (Site) to address impacted soil resulting from eighteen releases that occurred at the Site between April 2014 and April 2020. The Site is located in Units B, C, F, G and H, Section 21, Township 22 South, Range 30 East, in Eddy County, New Mexico (Figure 1).

The Remediation Work Plans (Work Plans) submitted to the NMOCD proposed to address the impacted soil resulting from the releases through excavation and delineation of impacted soil, and installation of 30-mil impermeable liners to address identified impacts deeper than four feet in the subsurface. The following report describes the implementation of the final remediation activities as outlined in the Work Plans. Based on the excavation and delineation activities, soil sample laboratory analytical results, and completion of remediation activities as outlined in the approved Work Plan, XTO is requesting closure for Incident Numbers nHMP1416331258, nHMP1411836637, nAB1422639350, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200, nAB1805036031, nAB1814128830 NRM2006432204, NRM2011445697, NRM2011535196, NRM2011559899, and NRM2002747253. Due to active production equipment and safety policy associated with working around those, XTO is requesting deferral of Incident number NRM1935433078 until the facility is decommissioned or until major facility construction occurs.



BACKGROUND

On April 23, 2020 and October 6, 2020, WSP submitted Work Plans to the NMOCD for eighteen releases that occurred at the Site between April 2014 and April 2020. A total of 3,687 barrels (bbls) of produced water and 13.41 bbls of crude oil were released onto the well pad and adjacent pasture. Approximately 2,599 bbls of produced water and 10.1 bbls of crude oil were recovered. XTO or the former operator reported each release to the NMOCD on a Form C-141. The releases are described in further detail in the original Work Plans. The releases were assigned Incident Numbers nHMP1416331258, nHMP1411836637, nAB1422639350, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200, nAB1805036031, nAB1814128830, NRM2006432204, NRM2011445697, NRM2011535196, NRM2011559899, NRM1935433078, and NRM2002747253.

The Work Plans detailed site characterization 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). Based on the site characterization, the following Closure Criteria were applied:

- Benzene: 10 milligrams per kilogram (mg/kg);
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg;
- Total petroleum hydrocarbons (TPH): 100 mg/kg; and
- Chloride: 600 mg/kg.

The Site receptors are identified on Figure 1 and the release locations are presented on Figure 2.

REMEDIATION WORK PLAN IMPLEMENTATION

The following sections of this report describe the remediation activities completed at the Site in order to fulfill the scope of work outlined in the approved Work Plans. All previous remediation activities, soil sample analytical results, and the detailed site characterization can be referenced in the original reports.

Northeast and Southwest Release Areas: Incident Numbers nHMP1411836637, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200 and NRM2011559899

During April and May 2021, WSP personnel were at the Site to oversee delineation and excavation of impacted soil in the northeast and southwest release areas, and the installation of a liner in the open excavations. To delineate impacts to soil and direct excavation activities, WSP screened soil for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively.



Delineation activities were conducted to define the vertical extent of chloride impacted soil prior to excavation activities and liner installation. Four potholes (LDP01-NE through LDP04-NE) were advanced in the northeast release area to depths ranging from 15 feet to 24.5 feet bgs and seven potholes (LDP01-SW through LDP07-SW) were advanced in the southwest release area to a depth of 13 feet bgs. At minimum, two soil samples were collected from each pothole for laboratory analysis: the depth representative of the excavation floor (4 feet bgs) and the depth that indicated clean vertical delineation. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Attachment 1. The pothole locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 3.

Impacted soil was excavated to an approximate depth of 4 feet bgs in the northeast and southwest approved liner installation areas. Excavation continued laterally until sidewall samples were compliant with the Closure Criteria in the top four feet. Following removal of impacted soil, WSP collected 5-point composite soil samples every 500 square feet, a frequency approved in the Work Plans, from the sidewalls of the excavations. The 5-point composite soil samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite samples LN-SW01 through LN-SW07 were collected from the sidewalls of the northeast excavation. Composite samples LW-SW01 through LW-SW07 were collected from the sidewall of southwest excavation. The excavation sample locations were mapped utilizing a GPS unit and are depicted on Figure 4.

The delineation and excavation 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 EPA Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in the pothole delineation soil samples collected at the terminal depth. Laboratory analytical results indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in the excavation sidewall samples collected from the final excavation extents. Laboratory analytical results are summarized in Table 1 with the corresponding Incident Numbers and the complete laboratory analytical reports are provided in Attachment 2.

Upon confirmation of the delineation and excavation soil sample analytical results, liner installation was completed as outlined in the approved Work Plans. XTO installed approximately 43,000 square feet of 30-mil impermeable liner in the floor of the northeast and southwest excavations to mitigate future chloride impacts into the subsurface (Figure 4). No residual



benzene, BTEX or TPH remained in the soil beneath the liners. After liner installation, the excavations were backfilled with clean backfill material and contoured to match preexisting Site conditions. Photographic documentation was conducted during delineation, excavation, and liner installation activities. A photographic log is provided in Attachment 3.

East, North, Northwest, and West Release Areas: Incident Numbers nHMP1416331258, nAB1422639350, nAB1805036031, nAB1814128830, NRM2006432204, NRM2011445697, NRM2011535196, NRM2002747253

During April and May 2021, delineation and excavation activities were completed in the east, north, northwest, and west release areas as outline in the approved Work Plans. To direct delineation and excavation activities, WSP screened soil for volatile aromatic hydrocarbons and chloride as described above.

Impacted soil was excavated to depths ranging from 1 foot to 12 feet bgs in the east, north, northwest, and west release areas. Excavations continued laterally and vertically until sidewall and floor samples were compliant with the Closure Criteria. Following removal of impacted soil, WSP collected 5-point composite soil samples every 500 square feet from the sidewalls (labeled as SW) and floors (labeled as FS) of each excavation. The excavation soil sample locations were mapped utilizing a GPS unit and are depicted on Figure 5 through Figure 8. The 5-point composite soil samples were collected, handled and analyzed as described above.

Laboratory analytical results indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in all excavation floor and sidewall samples collected from the final excavation extents. Laboratory analytical results are summarized in Table 1 with the corresponding Incident Numbers and the complete laboratory analytical reports are provided in Attachment 2.

WSP personnel utilized a hand auger to complete additional delineation activities in the west release extents, in areas requiring further vertical and/or lateral delineation to confirm the presence or absence of impacted soil. Four boreholes (BH01 through BH04) were advanced to a depth of 4 feet bgs within the west release extents associated with Incident Numbers nAB1422639350 and nAB1503439598. Two additional delineation points (SS07 and SS09) were advanced to a depth of 4 feet bgs at locations previously sampled for Incident Number NRM2002747253, that warranted additional subsurface investigation. Two soil samples were collected from each delineation point for laboratory analysis: the sample depth with the highest field screening result (approximately 1 foot bgs) and the sample from the final depth (approximately 4 feet bgs). The delineation soil samples were collected, handled and analyzed as described above. The delineation sample locations were mapped utilizing a handheld GPS unit and are depicted on Figure 9. Photographic documentation was conducted during delineation and excavation activities. A photographic log is provided in Attachment 3.



Laboratory analytical results indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in the delineation samples from boreholes BH01 through BH04, SS07, and SS09 and confirmed the absence of impacted soil in these areas. Laboratory analytical results are summarized in Table 1 with the corresponding Incident Numbers and the complete laboratory analytical reports are provided in Attachment 2.

CLOSURE REQUEST

Incident Numbers nHMP1416331258, nHMP1411836637, nAB1422639350, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200, nAB1805036031, nAB1814128830, NRM2006432204, NRM2002747253, NRM2011445697, NRM2011535196, and NRM2011559899

Final remediation activities were completed as outlined in the approved Work Plans. A total of approximately 11,790 cubic yards of impacted soil were excavated, hauled from the Site, and disposed of at R360 Hobbs, New Mexico under XTO approved manifests. All excavation confirmation soil samples collected followed the approved 500 square foot sampling variance. Laboratory analytical results for the final excavation floor and sidewall samples indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in all unlined excavation areas.

Two excavation areas totaling approximately 43,000 square feet were lined with a 30-mil impermeable liner over the residual chloride impacted soil to mitigate future impacts into the subsurface. The lined excavations were vertically delineated by eleven potholes within the release extents and horizontally delineated by excavation sidewall samples. Excavations have been backfilled and recontoured to match the original grade.

WSP and XTO believe these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests no further action for Incident Numbers nHMP1416331258, nHMP1411836637, nAB1422639350, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200, nAB1805036031, nAB1814128830, NRM2006432204, NRM2002747253, NRM2011445697, NRM2011535196 and NRM2011559899.

DEFERRAL REQUEST

Incident Number NRM1935433078

Excavation of impacted soil in the southwest release extent, associated with Incident Number NRM1935433078, was limited by the presence of active pipelines. An estimated 645 cubic yards of impacted soil remain in place in the southern portion of the well pad.



On May 11, 2021, additional delineation samples were collected from the previous BH01 and BH02 borehole locations to define the vertical extent of impacted soil. WSP screened soil for volatile aromatic hydrocarbons and chloride as described above. Soil samples BH01C and BH02C were collected from the delineation points from a depth of 8 feet bgs. The delineation soil samples were collected, handled and analyzed as described above.

Laboratory analytical results indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in vertical delineation soil samples BH01C and BH02C. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are provided in Attachment 2.

Based on laboratory analytical results, the vertical extent of impacted soil does not exceed 8 feet bgs. The impacted soil remaining in place immediately adjacent to active pipelines, is delineated vertically by delineation soil samples BH01C and BH02C and laterally by delineation samples from boreholes BH04 through BH07, as described in the original Work Plan. An estimated 645 cubic yards of impacted soil are estimated to be left in place. The deferral request area is shown on Figure 10.

XTO requests to complete remediation during any major future well pad construction/alteration or final plugging and abandonment, whichever occurs first. WSP and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. Based on the additional data collected as described in this report, impacts have been fully delineated, and no further soil removal can occur safely at this time. XTO requests deferral of final remediation for Incident Number NRM1935433078.

XTO and WSP have completed the remediation activities outlined in the approved Work Plans for all eighteen reportable release that occurred at the Site. If you have any questions or comments, please do not hesitate to contact Ms. Ashley Ager at (970) 385-1096.

Sincerely,

WSP USA Inc.

A handwritten signature in black ink that reads "Joseph S. Hernandez".

Joseph S. Hernandez
Associate Consultant, Geologist

A handwritten signature in black ink that reads "Ashley L. Ager".

Ashley L. Ager, P.G.
Managing Director, Geologist

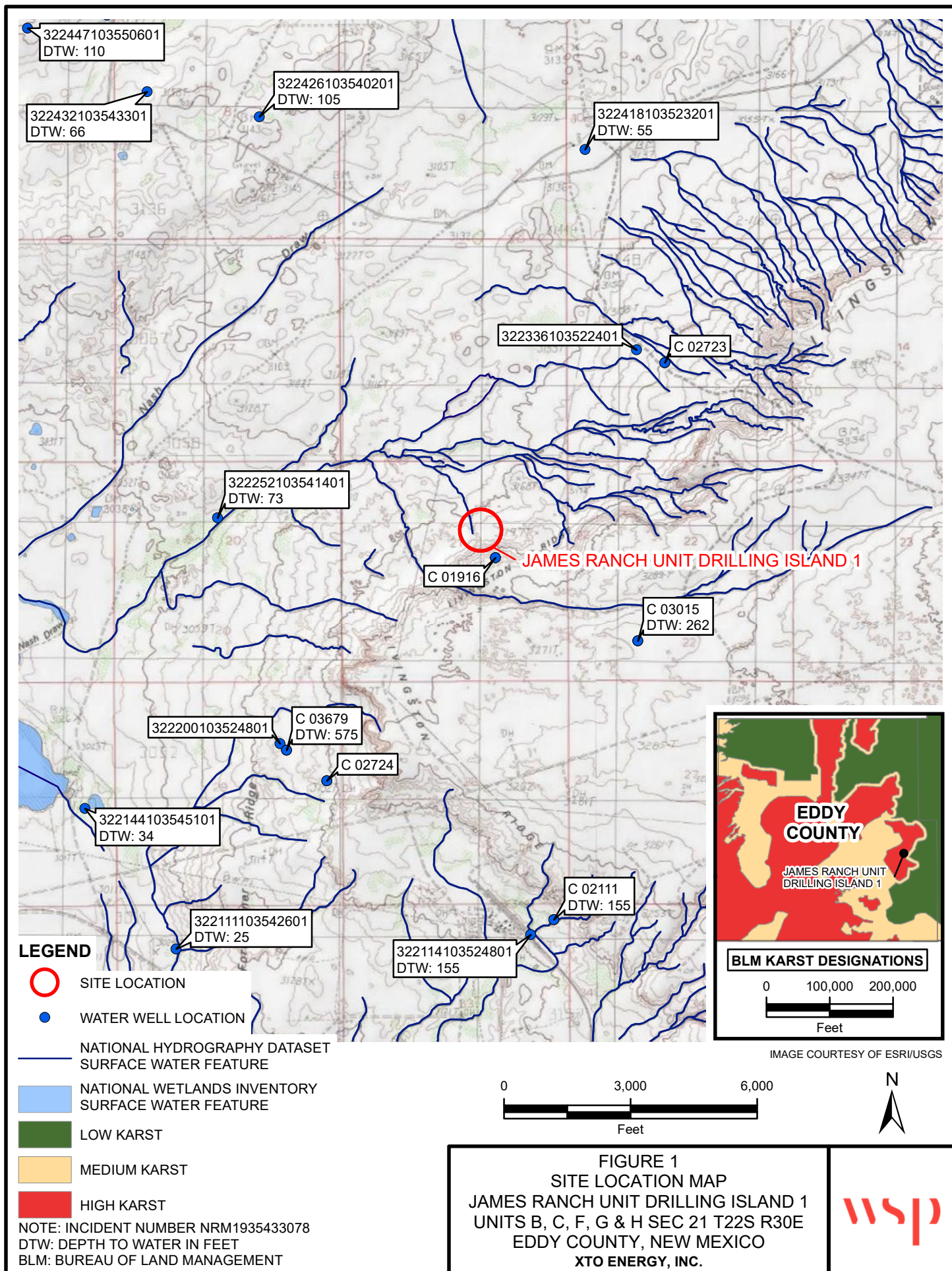


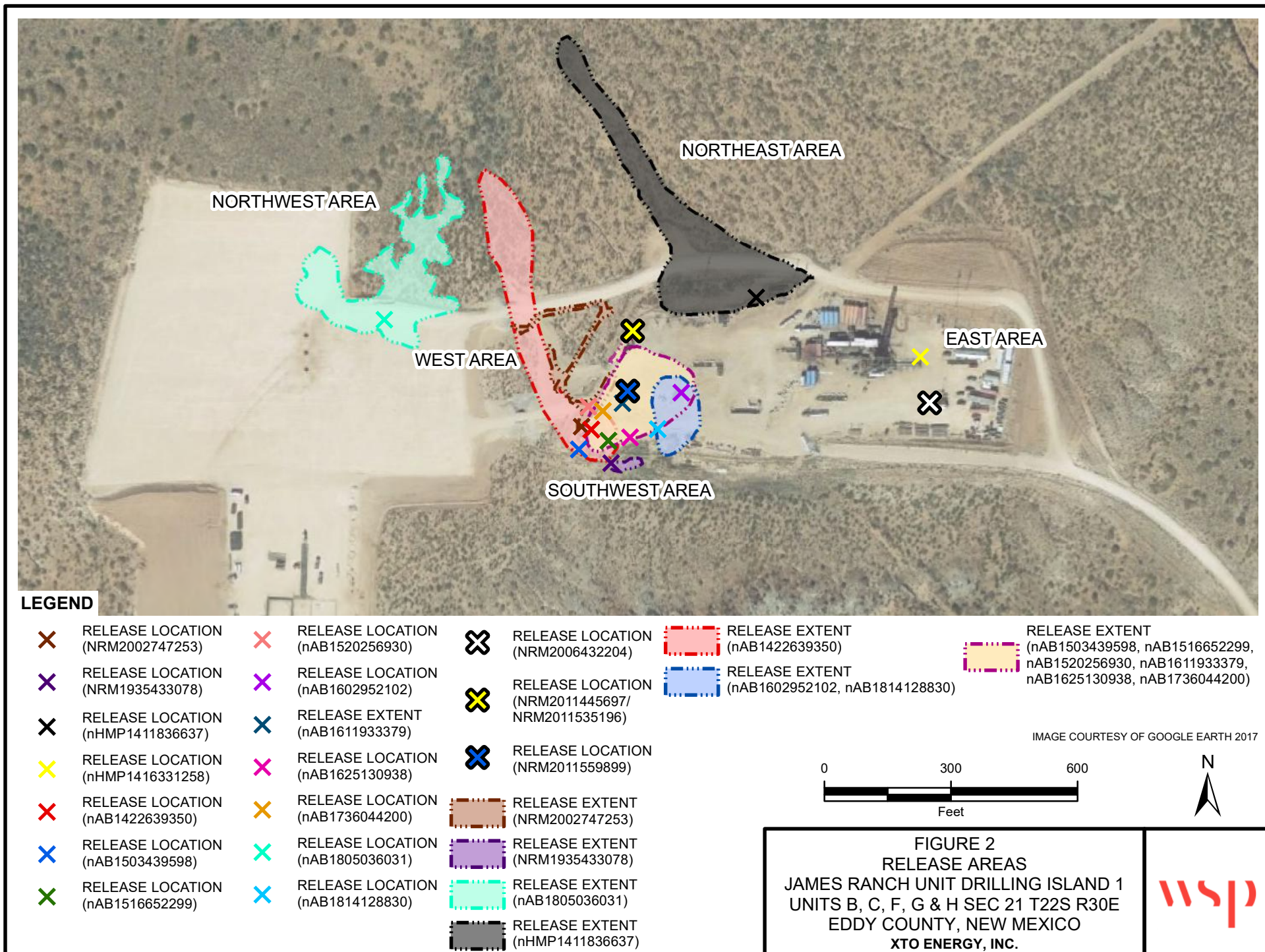
cc: Adrian Baker, XTO
United States Bureau of Land Management

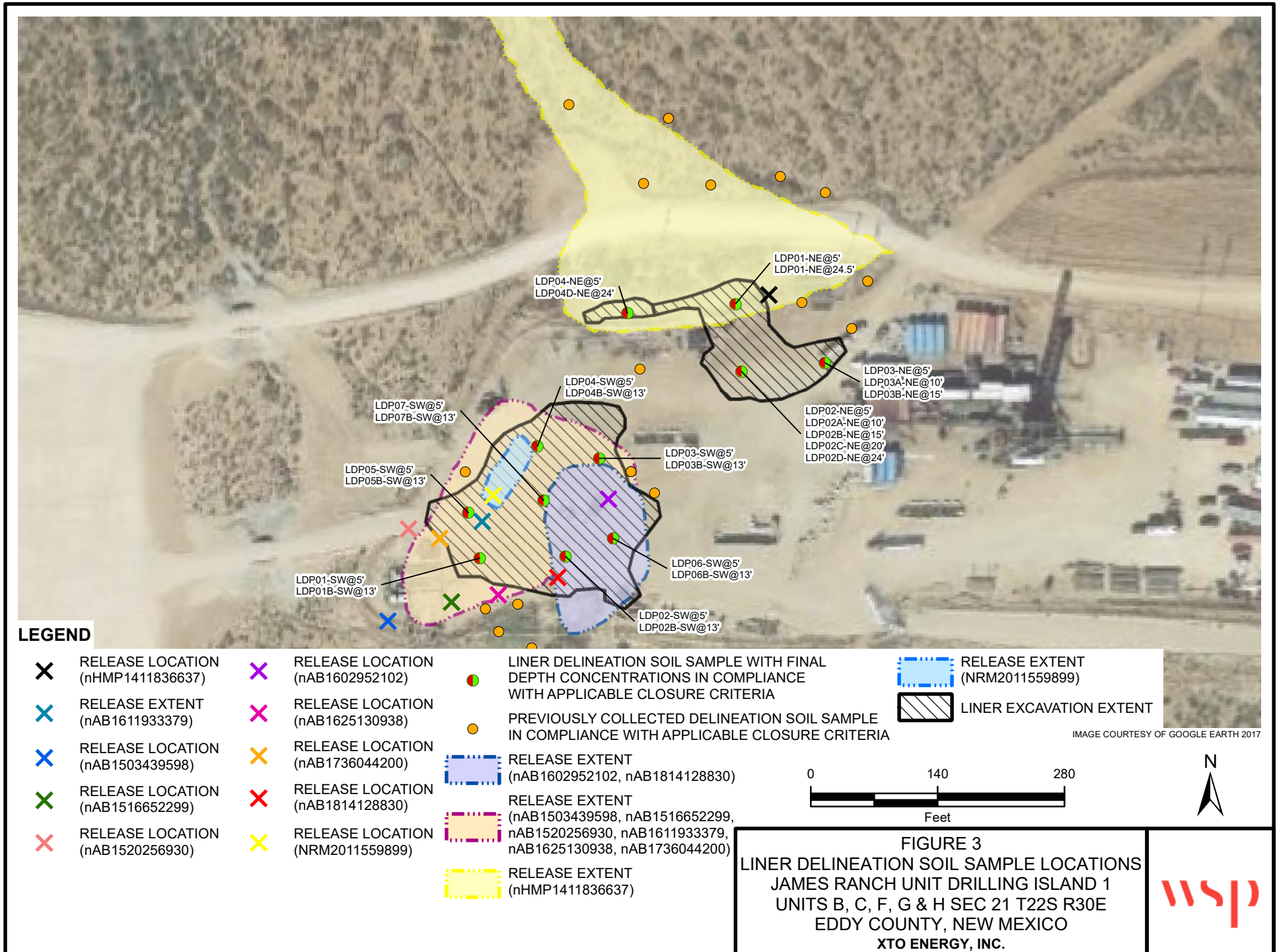
Attachments:

- Figure 1 Site Location Map
- Figure 2 Release Areas
- Figure 3 Liner Delineation Soil Sample Locations
- Figure 4 Northeast and Southwest Lined Excavation
- Figure 5 Northern Pasture Excavation
- Figure 6 Eastern Excavation
- Figure 7 Western Excavations
- Figure 8 Northwest Excavations
- Figure 9 Western Release Delineation
- Figure 10 Southwestern Release
- Table 1 Soil Analytical Results
- Attachment 1 Lithologic/Soil Sampling Logs
- Attachment 2 Laboratory Analytical Reports
- Attachment 3 Photographic Log

FIGURES







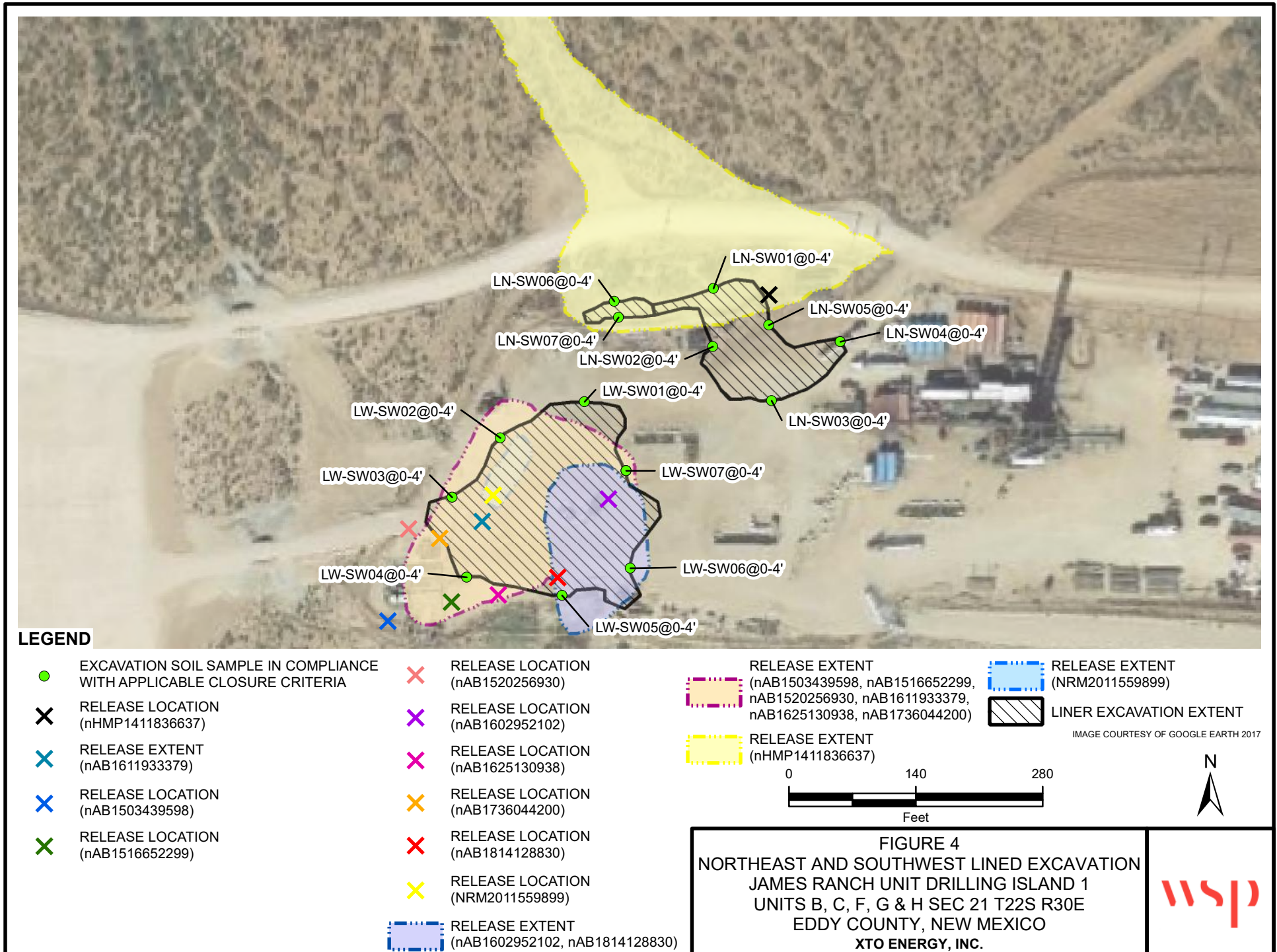


FIGURE 4
NORTHEAST AND SOUTHWEST LINED EXCAVATION
JAMES RANCH UNIT DRILLING ISLAND 1
UNITS B, C, F, G & H SEC 21 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



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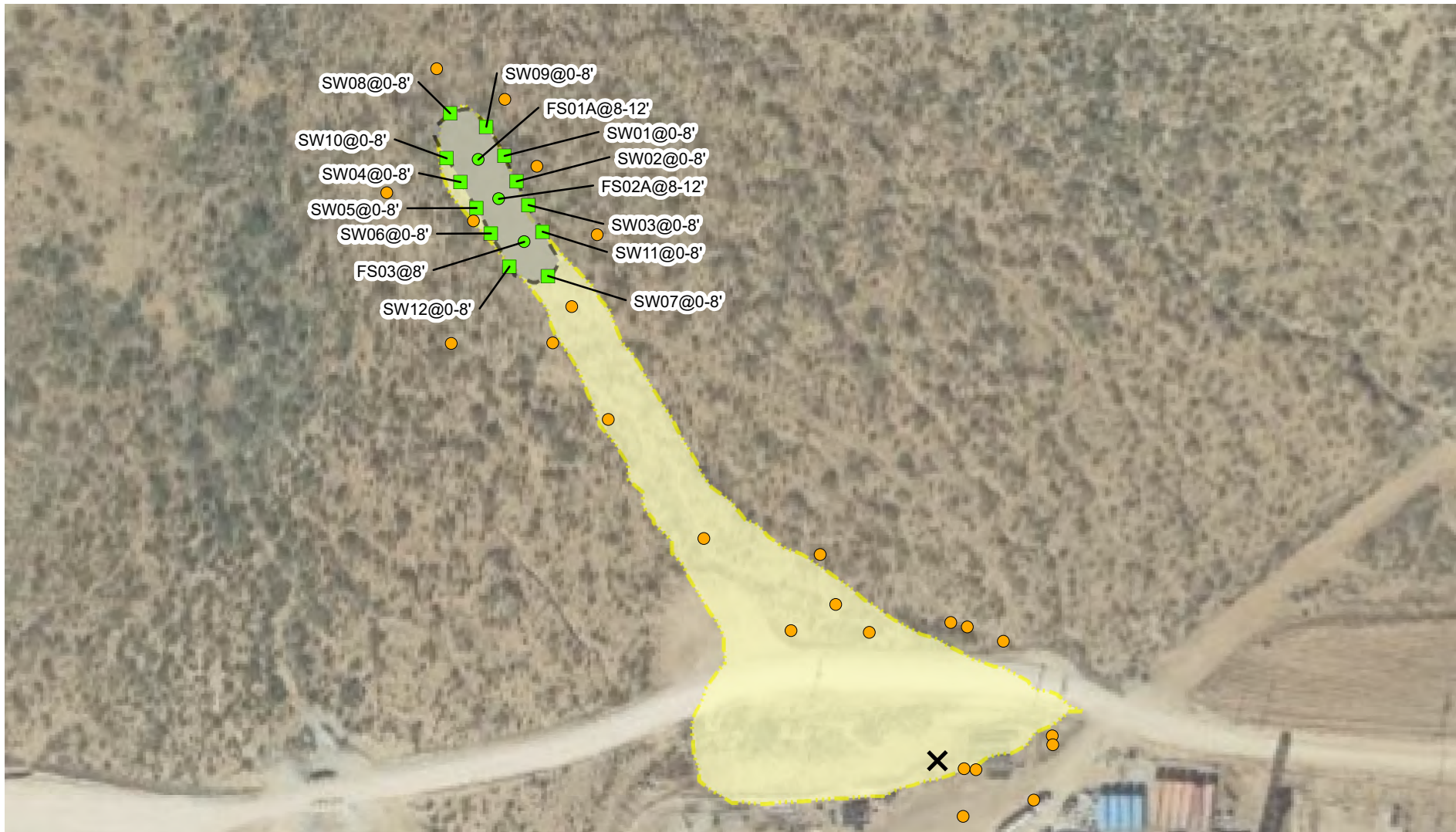


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- X** RELEASE LOCATION (nHMP1411836637)
- PREVIOUSLY COLLECTED DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- RELEASE EXTENT (nHMP1411836637)
- EXCAVATION EXTENT

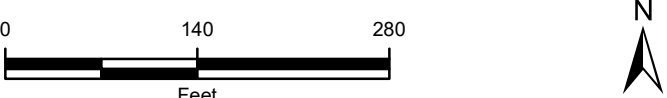


FIGURE 5
NORTHERN PASTURE EXCAVATION
JAMES RANCH UNIT DRILLING ISLAND 1
UNITS B, C, F, G & H SEC 21 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



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IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- PREVIOUSLY COLLECTED DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- ✕ RELEASE LOCATION (NRM2006432204)
- ✕ RELEASE LOCATION (nHMP1416331258)

- ▭ RELEASE EXTENT (NRM2006432204)
- ▭ EXCAVATION EXTENT

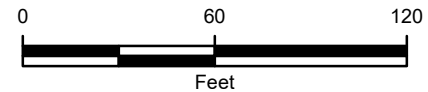
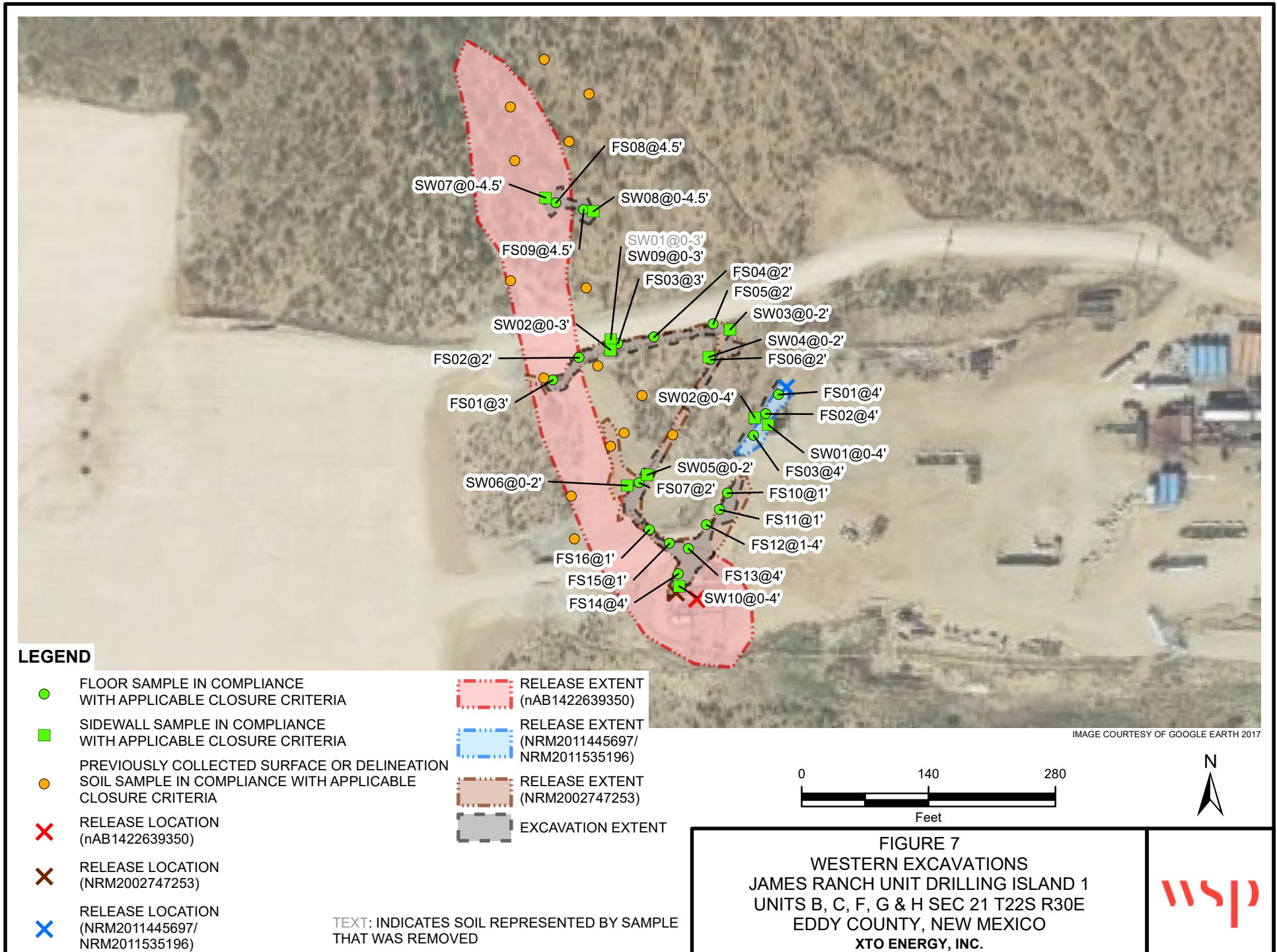


FIGURE 6
EASTERN EXCAVATION
JAMES RANCH UNIT DRILLING ISLAND 1
UNITS B, C, F, G & H SEC 21 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.





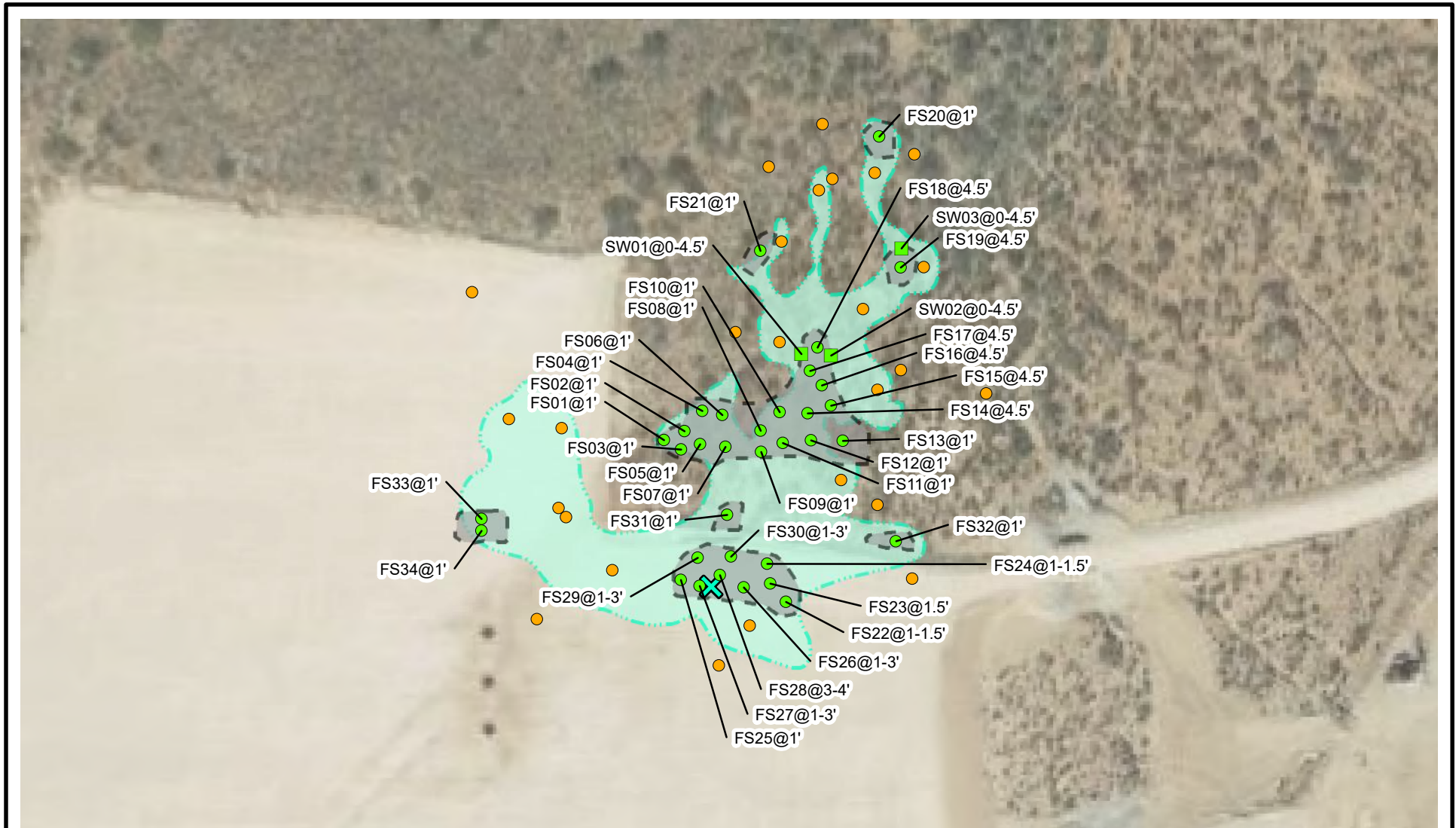








IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

-  RELEASE LOCATION (nAB1805036031)
-  FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
-  SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
-  PREVIOUSLY COLLECTED SURFACE OR DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

-  RELEASE EXTENT (nAB1805036031)
-  EXCAVATION EXTENT

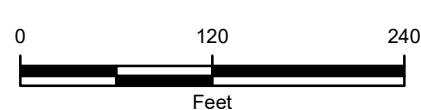
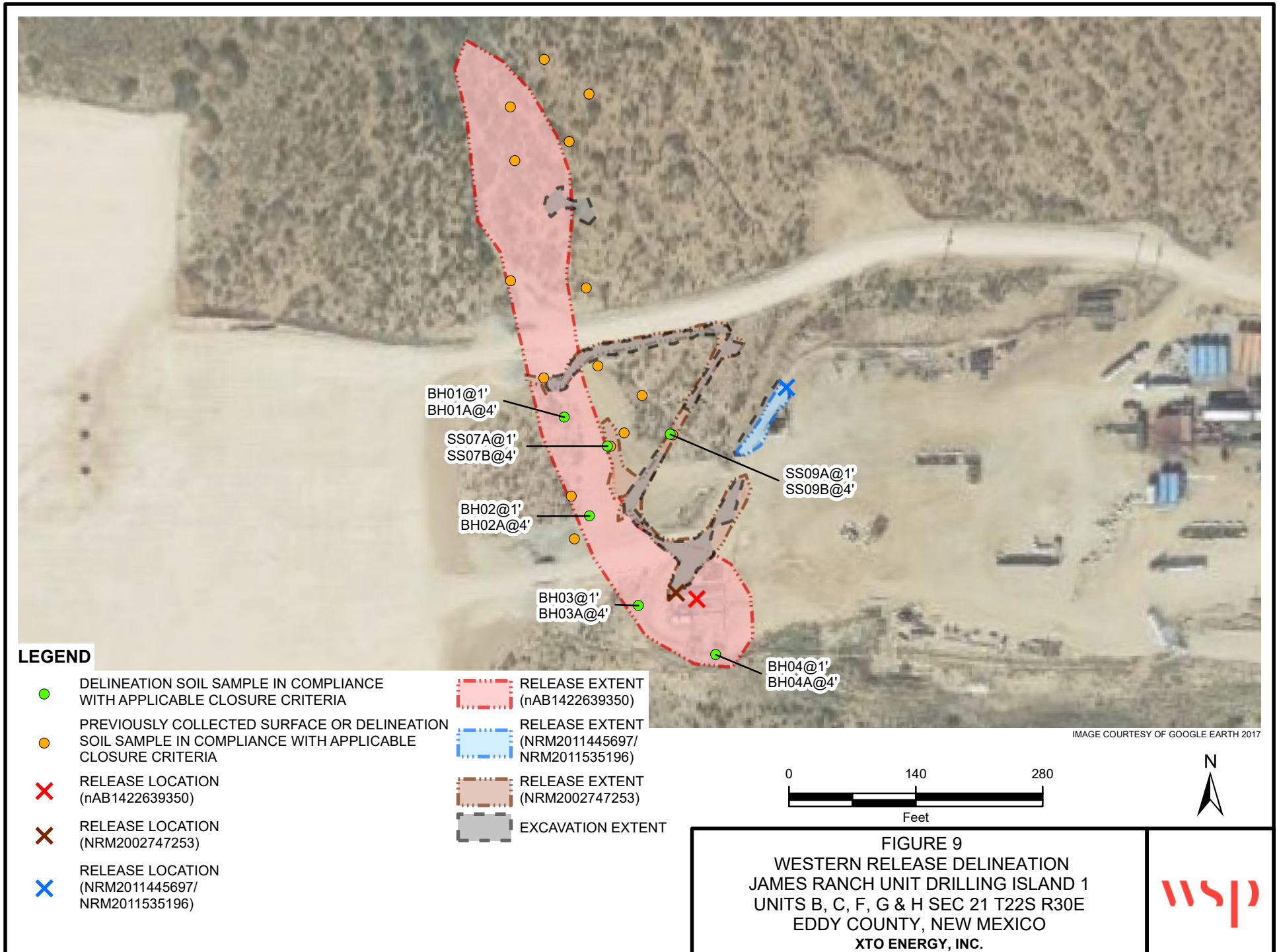


FIGURE 8
NORTHWEST EXCAVATIONS
JAMES RANCH UNIT DRILLING ISLAND 1
UNITS B, C, F, G & H SEC 21 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.





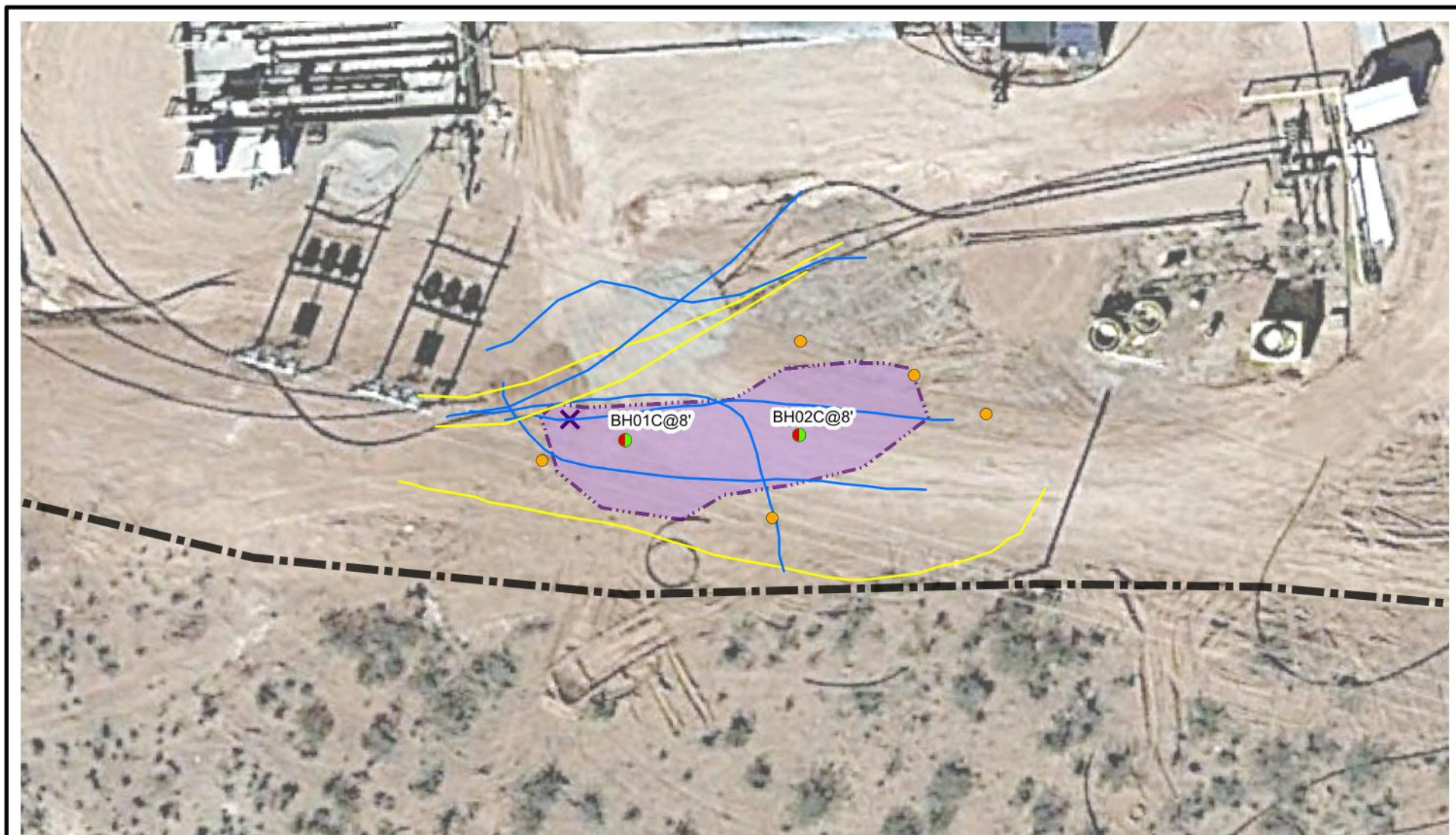


IMAGE COURTESY OF GOOGLE EARTH 2014

LEGEND

- X RELEASE LOCATION (NRM1935433078)
 - DELINEATION SOIL SAMPLE WITH FINAL DEPTH CONCENTRATIONS IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
 - PREVIOUSLY COLLECTED SURFACE OR DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- GAS/PIPELINE
 - WATER LINE
 - WELL PAD BOUNDARY
 - RELEASE EXTENT (NRM1935433078)

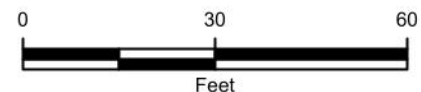
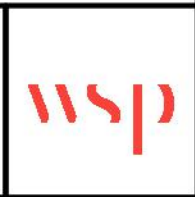


FIGURE 10
SOUTHWESTERN RELEASE AREA
JAMES RANCH UNIT DRILLING ISLAND 1
UNITS B, C, F, G & H SEC 21 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



C:\Users\USJG689584\OneDrive - WSP\O365\Documents\012919259_JRU DI #163H012919259_FIG10_SOUTHWEST_EXC_2021.mxd

TABLES

Table 1

**Soil Analytical Results
James Ranch Unit Drilling Island 1**

Incident Numbers nHMP1416331258, nHMP1411836637, nAB1422639350, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200, nAB1805036031, nAB1814128830 NRM2006432204, NRM2011445697, NRM2011535196, NRM2011559899, NRM1935433078 and NRM2002747253

XTO Energy, Inc.
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Samples										
Northeast Liner Area (Incident Number nHMP1411836637)										
LDP01-NE	04/07/2021	5	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	1,990
LDP01-NE	04/07/2021	24.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	204
LDP02-NE	04/08/2021	5	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	397
LDP02A-NE	04/08/2021	10	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	731
LDP02B-NE	04/08/2021	15	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	1,580
LDP02C-NE	04/08/2021	20	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	73.3
LDP02D-NE	04/08/2021	24	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	97.9
LDP03-NE	04/08/2021	5	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	233
LDP03A-NE	04/08/2021	10	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	62.3
LDP03B-NE	04/08/2021	15	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	66.0
LDP04-NE	04/27/2021	5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	927
LDP04D-NE	04/27/2021	24	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	243
Southwest Liner Area (nAB1422639350, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200 and NRM2011559899)										
LDP01-SW	04/07/2021	5	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	488
LDP01B-SW	04/07/2021	13	<0.00199	<0.00199	<49.8	57.8	<49.8	57.8	57.8	37.6

Table 1

**Soil Analytical Results
James Ranch Unit Drilling Island 1**

Incident Numbers nHMP1416331258, nHMP1411836637, nAB1422639350, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200, nAB1805036031, nAB1814128830 NRM2006432204, NRM2011445697, NRM2011535196, NRM2011559899, NRM1935433078 and NRM2002747253

XTO Energy, Inc.
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
LDP02-SW	04/07/2021	5	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	552
LDP02B-SW	04/07/2021	13	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	52.5
LDP03-SW	04/07/2021	5	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	7,070
LDP03B-SW	04/07/2021	13	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	229
LDP04-SW	04/26/2021	5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	1,960
LDP04B-SW	04/26/2021	13	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	18.1
LDP05-SW	04/26/2021	5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	12.0
LDP05B-SW	05/04/2021	13	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	144
LDP06-SW	04/27/2021	5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	107
LDP06B-SW	04/27/2021	13	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	115
LDP07-SW	04/27/2021	5	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	892
LDP07B-SW	04/27/2021	13	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	19.9
Liner Excavation Samples										
Northeast Lined Excavation Area (Incident Number nHMP1411836637)										
LN-SW01	04/16/2021	0 - 4	<0.00200	<0.00399	<49.9	<49.9	55.8	<49.9	55.8	321
LN-SW02	04/16/2021	0 - 4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	463
LN-SW03	04/16/2021	0 - 4	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	276

Table 1

**Soil Analytical Results
James Ranch Unit Drilling Island 1**

Incident Numbers nHMP1416331258, nHMP1411836637, nAB1422639350, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200, nAB1805036031, nAB1814128830 NRM2006432204, NRM2011445697, NRM2011535196, NRM2011559899, NRM1935433078 and NRM2002747253

XTO Energy, Inc.
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
LN-SW04	04/19/2021	0 - 4	<0.00200	0.00572	<50.0	<50.0	<50.0	<50.0	<50.0	52.6
LN-SW05	04/19/2021	0 - 4	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	169
LN-SW06	04/19/2021	0 - 4	<0.00199	<0.00398	<50.1	<50.1	<50.1	<50.1	<50.1	11.4
LN-SW07	04/19/2021	0 - 4	<0.00199	<0.00398	<50.1	<50.1	<50.1	<50.1	<50.1	401
Southwest Lined Excavation Area (Incident Numbes nAB1422639350, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200 and NRM2011559899)										
LW-SW01	04/22/2021	0 - 4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	377
LW-SW02	04/22/2021	0 - 4	0.00212	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	466
LW-SW03	04/22/2021	0 - 4	0.00232	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	267
LW-SW04	04/22/2021	0 - 4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	290
LW-SW05	04/22/2021	0 - 4	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	398
LW-SW06	04/22/2021	0 - 4	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	397
LW-SW07	04/22/2021	0 - 4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	537
Eastern Excavation Area (Incident Number nHMP1416331258 and NRM2006432204)										
FS01	04/09/2021	4	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	271
FS02	04/09/2021	4	<0.00199	<0.00199	<50.1	55.7	<50.1	55.7	55.7	102

Table 1

**Soil Analytical Results
James Ranch Unit Drilling Island 1**

Incident Numbers nHMP1416331258, nHMP1411836637, nAB1422639350, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200, nAB1805036031, nAB1814128830 NRM2006432204, NRM2011445697, NRM2011535196, NRM2011559899, NRM1935433078 and NRM2002747253

XTO Energy, Inc.
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
FS03	04/13/2021	4 - 7	<0.00200	<0.00200	<49.9	50.4	<49.9	50.4	50.4	364
FS04	04/12/2021	4	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	373
FS05	04/12/2021	4	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	110
FS06	04/13/2021	2 - 5	<0.00199	<0.00199	<50.0	61.4	<50.0	61.4	61.4	503
FS07	04/13/2021	4	<0.00200	<0.00200	<50.0	83.6	<50.0	83.6	83.6	289
FS08	04/13/2021	4	<0.00201	<0.00201	<50.0	99.1	<50.0	99.1	99.1	162
FS09	04/13/2021	4	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	286
FS10	04/13/2021	4	<0.00202	<0.00202	<50.0	72.4	<50.0	72.4	72.4	488
FS11	04/13/2021	4	<0.00200	<0.00200	<50.1	96.1	<50.1	96.1	96.1	152
FS12	04/13/2021	4	<0.00200	<0.00200	<50.0	95.4	<50.0	95.4	95.4	95.2
SW01	04/12/2021	0 - 4	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	245
SW02	04/13/2021	0 - 4	<0.00200	<0.00200	<50.0	50.4	<50.0	50.4	50.4	390
SW03	04/13/2021	0 - 4	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	365
SW04	04/13/2021	0 - 4	<0.00200	<0.00200	<49.8	71.9	<49.8	71.9	71.9	221
Western Excavation Area (Incident Numbers NRM2011445697 and NRM2011535196)										
FS01	04/27/2021	4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	382

Table 1

**Soil Analytical Results
James Ranch Unit Drilling Island 1**

Incident Numbers nHMP1416331258, nHMP1411836637, nAB1422639350, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200, nAB1805036031, nAB1814128830 NRM2006432204, NRM2011445697, NRM2011535196, NRM2011559899, NRM1935433078 and NRM2002747253

XTO Energy, Inc.
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
FS02	04/27/2021	4	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	208
FS03	04/27/2021	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	428
SW01	04/27/2021	0 - 4	<0.00202	0.0253	<49.9	<49.9	<49.9	<49.9	<49.9	271
SW02	04/27/2021	0 - 4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	516
Northern Pasture Excavation Area (Incident Number nHMP1411836637)										
FS01	05/17/2021	8	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	643
FS01A	05/21/2021	8 - 12	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	194
FS02	05/17/2021	8	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	962
FS02A	05/21/2021	8 - 12	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	192
FS03	05/17/2021	8	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	522
FS04	05/21/2021	8 - 12	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	320
FS05	05/21/2021	8 - 12	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	221
SW01	05/17/2021	0 - 8	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	226
SW02	05/17/2021	0 - 8	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	86.8
SW03	05/17/2021	0 - 8	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	361
SW04	05/17/2021	0 - 8	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	182

Table 1

**Soil Analytical Results
James Ranch Unit Drilling Island 1**

Incident Numbers nHMP1416331258, nHMP1411836637, nAB1422639350, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200, nAB1805036031, nAB1814128830 NRM2006432204, NRM2011445697, NRM2011535196, NRM2011559899, NRM1935433078 and NRM2002747253

XTO Energy, Inc.
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
SW05	05/17/2021	0 - 8	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	574
SW06	05/17/2021	0 - 8	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	20.6
SW07	05/21/2021	0 - 8	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	140
SW08	05/21/2021	0 - 8	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	84.9
SW09	05/21/2021	0 - 8	<0.00200	<0.00399	50.8	<50.0	<50.0	50.8	50.8	79.7
SW10	05/21/2021	0 - 8	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	163
SW11	05/21/2021	0 - 8	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	119
SW12	05/21/2021	0 - 8	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	171
Northwest Excavation Area (Incident Number nAB18050360310)										
FS01	05/03/2021	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	242
FS02	05/03/2021	1	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	81.7
FS03	05/03/2021	1	<0.00202	<0.00403	<49.8	<49.8	<49.8	<49.8	<49.8	262
FS04	05/03/2021	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	50.1
FS05	05/03/2021	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	452
FS06	05/03/2021	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	214
FS07	05/03/2021	1	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	125

Table 1

**Soil Analytical Results
James Ranch Unit Drilling Island 1**

Incident Numbers nHMP1416331258, nHMP1411836637, nAB1422639350, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200, nAB1805036031, nAB1814128830 NRM2006432204, NRM2011445697, NRM2011535196, NRM2011559899, NRM1935433078 and NRM2002747253

XTO Energy, Inc.
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
FS08	05/03/2021	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	37.1
FS09	05/03/2021	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	87.0
FS10	05/03/2021	1	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	86.5
FS11	05/03/2021	1	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	124
FS12	05/03/2021	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	14.8
FS13	05/03/2021	1	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	79.2
FS14	05/03/2021	4.5	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	30.4
FS15	05/03/2021	4.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	109
FS16	05/03/2021	4.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	102
FS17	05/03/2021	4.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	235
FS18	05/03/2021	4.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	33.8
FS19	05/05/2021	4.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	7.81
FS20	05/05/2021	1	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	10.9
FS21	05/05/2021	1	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	8.07
FS22	05/17/2021	1 - 1.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	129
FS23	05/17/2021	1.5	<0.00200	<0.00400	<49.8	<49.8	<49.8	<49.8	<49.8	125

Table 1

**Soil Analytical Results
James Ranch Unit Drilling Island 1**

Incident Numbers nHMP1416331258, nHMP1411836637, nAB1422639350, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200, nAB1805036031, nAB1814128830 NRM2006432204, NRM2011445697, NRM2011535196, NRM2011559899, NRM1935433078 and NRM2002747253

XTO Energy, Inc.
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
FS24	05/17/2021	1 - 1.5	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	370
FS25	05/17/2021	1	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	373
FS26	05/17/2021	1 - 3	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	68.1
FS27	05/17/2021	1 - 3	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	64.4
FS28	05/17/2021	3 - 4	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	11.9
FS29	05/17/2021	1 - 3	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	64.3
FS30	05/17/2021	1 - 3	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	306
FS31	05/18/2021	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	342
FS32	05/18/2021	1	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	383
FS33	05/18/2021	1	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	84.4
FS34	05/18/2021	1	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	187
SW01	05/05/2021	0 - 4.5	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	101
SW02	05/05/2021	0 - 4.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	34.2
SW03	05/05/2021	0 - 4.5	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	83.2
Western Excavation Areas (Incident Numbers nAB1422639350 and NRM2002747253)										
FS01	04/26/2021	3	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	422

Table 1

**Soil Analytical Results
James Ranch Unit Drilling Island 1**

Incident Numbers nHMP1416331258, nHMP1411836637, nAB1422639350, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200, nAB1805036031, nAB1814128830 NRM2006432204, NRM2011445697, NRM2011535196, NRM2011559899, NRM1935433078 and NRM2002747253

XTO Energy, Inc.
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
FS02	04/26/2021	2	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	115
FS03	04/26/2021	3	<0.00244	<0.00488	<50.0	<50.0	<50.0	<50.0	<50.0	309
FS04	04/26/2021	2	<0.00199	<0.00398	<50.1	<50.1	<50.1	<50.1	<50.1	191
FS05	04/30/2021	2	<0.00200	<0.00399	<50.0	<50.0	70.6	<50.0	70.6	55.6
FS06	04/30/2021	2	<0.00198	<0.00396	<50.0	<50.0	50.2	<50.0	50.2	25.2
FS07	04/30/2021	2	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	30.3
FS08	04/30/2021	4.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	6.17
FS09	04/30/2021	4.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	6.05
FS10	05/05/2021	1	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	106
FS11	05/05/2021	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	101
FS12	05/06/2021	1 - 4	<0.00202	<0.00404	<49.8	<49.8	<49.8	<49.8	<49.8	185
FS13	05/06/2021	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	191
FS14	05/06/2021	4	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	410
FS15	05/06/2021	1	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	21.7
FS16	05/06/2021	1	<0.00201	<0.00402	<49.7	<49.7	<49.7	<49.7	<49.7	34.0
SW01	04/26/2021	0 - 3	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	629

Table 1

**Soil Analytical Results
James Ranch Unit Drilling Island 1**

Incident Numbers nHMP1416331258, nHMP1411836637, nAB1422639350, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200, nAB1805036031, nAB1814128830 NRM2006432204, NRM2011445697, NRM2011535196, NRM2011559899, NRM1935433078 and NRM2002747253

XTO Energy, Inc.
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
SW09	05/04/2021	0 - 3	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	195
SW02	04/26/2021	0 - 3	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	135
SW03	04/30/2021	0 - 2	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	34.1
SW04	04/30/2021	0 - 2	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	120
SW05	04/30/2021	0 - 2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	83.5
SW06	04/30/2021	0 - 2	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	63.5
SW07	04/30/2021	0 - 4.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	9.87
SW08	04/30/2021	0 - 4.5	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	5.50
SW10	05/06/2021	0 - 4	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	5.22
Delineation Samples										
Southwestern Release (Incident Number NRM1935433078)										
BH01C	05/11/2021	8	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	11.1
BH02C	05/11/2021	8	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	43.8
Western Releases (Incident Number nAB1422639350 and nAB1503439598)										
BH01	05/11/2021	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	12.2
BH01A	05/11/2021	4	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	70.4

Table 1

**Soil Analytical Results
James Ranch Unit Drilling Island 1**

Incident Numbers nHMP1416331258, nHMP1411836637, nAB1422639350, nAB1503439598, nAB1516652299, nAB1520256930, nAB1602952102, nAB1611933379, nAB1625130938, nAB1736044200, nAB1805036031, nAB1814128830 NRM2006432204, NRM2011445697, NRM2011535196, NRM2011559899, NRM1935433078 and NRM2002747253

**XTO Energy, Inc.
Eddy County, New Mexico**

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
BH02	05/11/2021	1	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	17.2
BH02A	05/11/2021	4	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	48.2
BH03	05/11/2021	1	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	71.9
BH03A	05/11/2021	4	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	73.6
BH04	05/10/2021	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	58.3
BH04A	05/10/2021	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	122
West Release Area (Incident Number NRM2002747253)										
SS07A	05/14/2021	1	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	39.6
SS07B	05/14/2021	4	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	126
SS09A	05/14/2021	1	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	8.11
SS09B	05/14/2021	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	24.5

Notes:

ft - feet/foot

mg/kg - milligrams per kilograms

BTEX - benzene, toluene, ethylbenzene, and total xylenes

TPH - total petroleum hydrocarbons

DRO - diesel range organics

GRO - gasoline range organics

ORO - oil range organics

NMOCD - New Mexico Oil Conservation Division

NMAC - New Mexico Administrative Code


< - indicates result is less than the stated laboratory method practical quantitation limit


NE - Not Established


BOLD - indicates results exceed the higher of the background sample result or applicable regulatory standard

Greyed data represents samples that were excavated

ATTACHMENT 1: LITHOLOGIC/SOIL SAMPLING LOGS

 <p>WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220</p>				PH Name: LDP01-NE		Date: 4/7/2021			
				Site Name: James Ranch Unit Drilling Island 1					
				NE Liner Delineation					
				WSP Job Number: TE012919259					
LITHOLOGIC / SOIL SAMPLING LOG						Logged By: WM	Method: Track Hoe		
Lat/Long: 32.381500, -103.883338			Field Screening: HACH chloride strips, PID			Hole Diameter: NA	Total Depth: 24.5 feet bgs		
Comments: Chloride test performed with 1:4 dilution factor of soil to distilled water. Values do not include correction factor. SAA - Same As Above									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
						0		0-24.5' SAND, dry, tan, well graded, trace silt, no stain, no odor	
Dry	1,448	0.4	N	LDP01-NE	5	5	SW		
Dry	1,268	0.2	N	LDP01-NE	10	10	SW		
Dry	1,768	0.6	N	LDP01-NE	15	15	SW SAA		
Dry	556	0.4	N	LDP01-NE	20	20	SW		
Dry	164	0.3	N	LDP01-NE	24.5		SW		
TD @ 24.5 feet bgs									

 <p>WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220</p>				PH Name: LDP01-SW		Date: 4/7/2021			
				Site Name: James Ranch Unit Drilling Island 1					
				SW Liner Delineation					
				WSP Job Number: TE012919259					
LITHOLOGIC / SOIL SAMPLING LOG						Logged By: WM		Method: Track Hoe	
Lat/Long: 32.380674, -103.884258				Field Screening: HACH chloride strips, PID		Hole Diameter: NA		Total Depth: 13 feet bgs	
Comments: Chloride test performed with 1:4 dilution factor of soil to distilled water. Values do not include correction factor. SAA - Same As Above									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
						0	SP	0-13' SAND, dry, reddish brown, fine grain, trace silt, no odor no stain	
Dry	416	0.2	N	LDP01-SW	5	5	SP		
Dry	<112	0.8	N	LDP01-SW	10	10	SP	moderate consolidation	
Dry	<112	0.3	N	LDP01-SW	13		SP	poorly consolidated	
TD @ 13 feet bgs									

 <p>WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220</p>				PH Name: LDP02-NE		Date: 4/8/2021			
				Site Name: James Ranch Unit Drilling Island 1					
				NE Liner Delineation					
				WSP Job Number: TE012919259					
LITHOLOGIC / SOIL SAMPLING LOG						Logged By: WM		Method: Track Hoe	
Lat/Long: 32.381301, -103.883325			Field Screening: HACH chloride strips, PID			Hole Diameter: NA		Total Depth: 24 feet bgs	
Comments: Chloride test performed with 1:4 dilution factor of soil to distilled water. Values do not include correction factor. SAA - Same As Above									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
						0	SW	0-24' SAND, dry, tan, well graded, trace silt, no stain, no odor	
Dry	1,036	0.1	N	LDP02-NE	5	5	SW		
Dry	1,892	0.7	N	LDP02-NE	10	10	SW		
Dry	1,356	0.9	N	LDP02-NE	15	15	SW		
Dry	112	0.8	N	LDP02-NE	20	20	SW		
Dry	164	0.7	N	LDP02-NE	24		SW		
TD @ 24 feet bgs									


 <p>WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220</p>	PH Name: LDP02-SW	Date: 4/7/2021
	Site Name: James Ranch Unit Drilling Island 1	
	SW Liner Delineation	
	WSP Job Number: TE012919259	

LITHOLOGIC / SOIL SAMPLING LOG		Logged By: WM	Method: Track Hoe
Lat/Long: 32.380678, -103.883950	Field Screening: HACH chloride strips, PID	Hole Diameter: Pothole, Diameter N/A	Total Depth: 13 feet bgs

Comments:
Chloride test performed with 1:4 dilution factor of soil to distilled water. Values do not include correction factor. SAA - Same As Above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	SP	0-13' SAND, dry, reddish brown, poorly graded, fine grain, trace silt, no stain, no odor
Dry	460	0.7	N	LDP02-SW	5	5	SP	
Dry	<112	1.0	N	LDP02-SW	10	10	SP	moderate consolidation
Dry	<112	0.6	N	LDP02-SW	13		SP	poor consolidation

TD @ 13 feet bgs


 <p style="text-align: center;">WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220</p>	PH Name: LDP03-NE	Date: 4/8/2021
	Site Name: James Ranch Unit Drilling Island 1	
	NE Liner Delineation	
	LTE Job Number: TE012919259	

LITHOLOGIC / SOIL SAMPLING LOG		Logged By: WM	Method: Track Hoe
Lat/Long: 32.381262, -103.883020	Field Screening: HACH chloride strips, PID	Hole Diameter: NA	Total Depth: 15 feet bgs

Comments:
Chloride test performed with 1:4 dilution factor of soil to distilled water. Values do not include correction factor. SAA - Same As Above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	SW	0-15' SAND, dry, reddish brown, well graded, gypsiferous, trace silt, no stain, no odor
Dry	460	0.4	N	LDP03-NE	5	5	SW	
Moist	<112	1.2	N	LDP03-NE	10	10	SW	
Moist	<112	0.7	N	LDP03-NE	15	15	SW	

TD @ 15 feet bgs

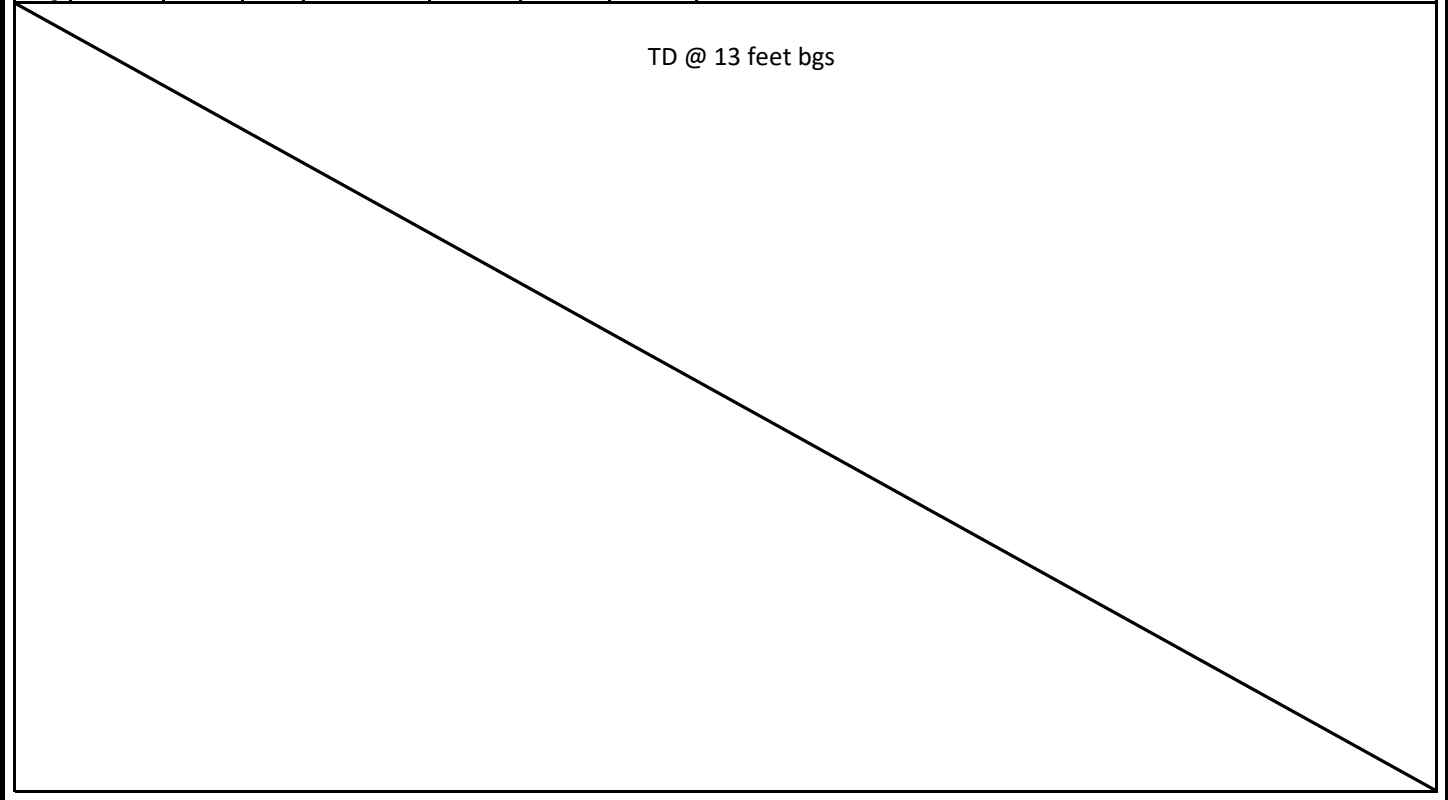
 <p style="text-align: center;">WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220</p>	PH Name: LDP03-SW	Date: 4/7/2021
	Site Name: James Ranch Unit Drilling Island 1	
	SW Liner Delineation	
	LTE Job Number: TE012919259	


LITHOLOGIC / SOIL SAMPLING LOG		Logged By: WM	Method: Track Hoe
Lat/Long: 32.380976, -103.883828	Field Screening: HACH chloride strips, PID	Hole Diameter: NA	Total Depth: 13 feet bgs


Comments:
Chloride test performed with 1:4 dilution factor of soil to distilled water. Values do not include correction factor. SAA - Same As Above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	SW	0-13' SAND, dry, reddish brown, well graded, trace silt, no stain, no odor
Dry	4,839	0.8	N	LDP03-SW	5	5	SW	
Dry	192	1.6	N	LDP03-SW	10	10	SW	moderate consolidation
Dry	164	0.3	N	LDP03-SW	13		SW	

TD @ 13 feet bgs



 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220				PH Name: LDP04-NE		Date: 4/27/2021			
				Site Name: James Ranch Unit Drilling Island 1					
				NE Liner Delineation					
				LTE Job Number: TE012919259					
LITHOLOGIC / SOIL SAMPLING LOG						Logged By: BB		Method: Track Hoe	
Lat/Long: 32.381416, -103.883726			Field Screening: HACH chloride strips, PID			Hole Diameter: NA		Total Depth: 24 feet bgs	
Comments: Chloride test performed with 1:4 dilution factor of soil to distilled water. Values include 40% correction factor. SAA - Same As Above									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
						0	SW	0-24' SAND, dry, tan, well graded, trace silt, no stain, no odor	
Dry	1,601	0.6	N	LDP04-NE	5	5	SW		
Dry	2,592	0.6	N		10	10	SW		
Dry	976	0.5	N		15	15	SW		
Dry	296	0.6	N		20	20	SW		
Dry	257	0.6	N	LDP04D-NE	24		SW		
TD @ 24 feet bgs									


 <p>WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220</p>	PH Name: LDP04-SW	Date: 4/26/2021
	Site Name: James Ranch Unit Drilling Island 1	
	SW Liner Delineation	
	LTE Job Number: TE012919259	

LITHOLOGIC / SOIL SAMPLING LOG		Logged By: BB	Method: Track Hoe
Lat/Long: 32.381013, -103.884050	Field Screening: HACH chloride strips, PID	Hole Diameter: NA	Total Depth: 13 feet bgs

Comments:
Chloride test performed with 1:4 dilution factor of soil to distilled water. Values include 40% correction factor. SAA - Same As Above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	SP	0-13' SAND, dry, reddish brown, poorly graded, fine grain, trace silt, no stain, no odor
Dry	1,041	0.5	N	LDP04-SW	5	5	SP	
Dry	476	0.5	N		10	10	SP moderate consolidation	
Dry	<124	0.5	N	LDP04B-SW	13		SP	poorly consolidated

TD @ 13 feet bgs

 <p>WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220</p>	PH Name: LDP05-SW	Date: 4/26/2021, 5/4/2021
	Site Name: James Ranch Unit Drilling Island 1	
	SW Liner Delineation	
	LTE Job Number: TE012919259	

LITHOLOGIC / SOIL SAMPLING LOG		Logged By: BB	Method: Track Hoe
Lat/Long: 32.380813, -103.884298	Field Screening: HACH chloride strips, PID	Hole Diameter: NA	Total Depth: 13 feet bgs

Comments:
Chloride test performed with 1:4 dilution factor of soil to distilled water. Values include 40% correction factor. SAA - Same As Above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	SP	0-13' SAND, dry, reddish brown, poorly graded, fine grain, trace silt, no stain, no odor
Dry	257	0.5	N	LDP05-SW	5	5	SP	
Dry	968	0.5	N		10	10	SP	moderate consolidation
Dry	257	0.5	N	LDP05B-SW	13		SP	poorly consolidated

TD @ 13 feet bgs

<p>WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220</p>	PH Name: LDP06-SW	Date: 4/27/2021
	Site Name: James Ranch Unit Drilling Island 1	
	SW Liner Delineation	
	LTE Job Number: TE012919259	

LITHOLOGIC / SOIL SAMPLING LOG		Logged By: BB	Method: Track Hoe
Lat/Long: 32.380685, -103.883741	Field Screening: HACH chloride strips, PID	Hole Diameter: NA	Total Depth: 13 feet bgs

Comments:
Chloride test performed with 1:4 dilution factor of soil to distilled water. Values include 40% correction factor. SAA - Same As Above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	SP	0-13' SAND, moist, reddish brown, poorly graded, fine grain, trace silt, no stain, no odor
Moist	<124	0.5	N	LDP06-SW	5	5	SP	
Moist	<124	0.5	N		10	10	SP	moderate consolidation
Moist	<124	0.5	N	LDP06B-SW	13		SP	poorly consolidated

TD @ 13 feet bgs


 <p>WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220</p>	PH Name: LDP07-SW	Date: 4/27/2021
	Site Name: James Ranch Unit Drilling Island 1	
	SW Liner Delineation	
	LTE Job Number: TE012919259	

LITHOLOGIC / SOIL SAMPLING LOG		Logged By: BB	Method: Track Hoe
Lat/Long: 32.380849, -103.884028	Field Screening: HACH chloride strips, PID	Hole Diameter: NA	Total Depth: 13 feet bgs

Comments:
Chloride test performed with 1:4 dilution factor of soil to distilled water. Values include 40% correction factor. SAA - Same As Above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	SP	0-13' SAND, moist, reddish brown, poorly graded, fine grain, trace silt, no stain, no odor
Moist	1,041	0.5	N	LDP07-SW	5	5	SP	
Moist	<124	0.5	N		10	10	SP	moderate consolidation
Moist	<124	0.5	N	LDP07B-SW	13		SP	poorly consolidated

TD @ 13 feet bgs


 <p>WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220</p>	PH Name: BH01	Date: 1/23/2020, 5/11/2021
	Site Name: James Ranch Unit Drilling Island 1	
	Incident Number: NRM1935433078	
	WSP Job Number: TE012919259	

LITHOLOGIC / SOIL SAMPLING LOG		Logged By: WM, AB	Method: Hand Auger/Track hoe
Lat/Long: 32.381937, -103.881894	Field Screening: HACH chloride strips , PID	Hole Diameter: 3 inches	Total Depth: 8 feet bgs

Comments:
Chloride test performed with 1:4 dilution factor of soil to distilled water. Values do not include correction factor. SAA - Same As Above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
Moist	6,568	1,068	N	BH01	0.5	0	SW	0.5-7.5' SAND, moist, brown sand, well-graded, sine to medium grain some silt, odor, no stain
Moist	7,708	881.2	N	BH01A	2	2	SW	
Moist	6,060	485.2	N			4	SW	
Moist	3,176	74.1	N			6	SW	
Moist	1,800	421.5	N	BH01B	7.5	7	SW	auger refusal 7.5-8' SAND, moist, reddish brown, poorly graded, fine grain, well consolidated, no stain, no odor
Moist	BDL	0	N	BH01C	8	8	SP	

TD @ 8 feet bgs

 <p>WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220</p>	PH Name: BH02	Date: 1/23/2020, 5/11/2021
	Site Name: James Ranch Unit Drilling Island 1	
	Incident Number: NRM1935433078	
	WSP Job Number: TE012919259	

LITHOLOGIC / SOIL SAMPLING LOG		Logged By: WM, AB	Method: Hand Auger/Track hoe
Lat/Long: 32.381976, -103.881967	Field Screening: HACH chloride strips, PID	Hole Diameter: 3 inches	Total Depth: 8 feet bgs

Comments:
Chloride test performed with 1:4 dilution factor of soil to distilled water. Values do not include correction factor. SAA - Same As Above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
Moist	7,708	665.2	N	BH02	0.5	0	SW	0.5-6.5' SAND, moist, brown, well graded, fine-medium grain, some silt, no stain, odor	
Moist	10,784	345.6	N	BH02A	2	2	SW		
Moist	1,612	289.3	N		4	4	SW		
Moist	988	46.1	N		6	6	SW		
Moist	424	31.1	N	BH02B	6.5	6.5	SW		auger refusal
Moist	BDL	0	N	BH02C	8	8	SP		6.5-8' SAND, moist, reddish brown, poorly graded, medium grain, well consolidated, no stain, no odor

TD @ 8 feet bgs

District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720

District II
 811 S. First St., Artesia, NM 88210
 Phone:(575) 748-1283 Fax:(575) 748-9720

District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV
 1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS
 Action 39045

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 39045
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAB1736044200 JAMES RANCH UNIT #012H, thank you. This closure is approved.	10/28/2021